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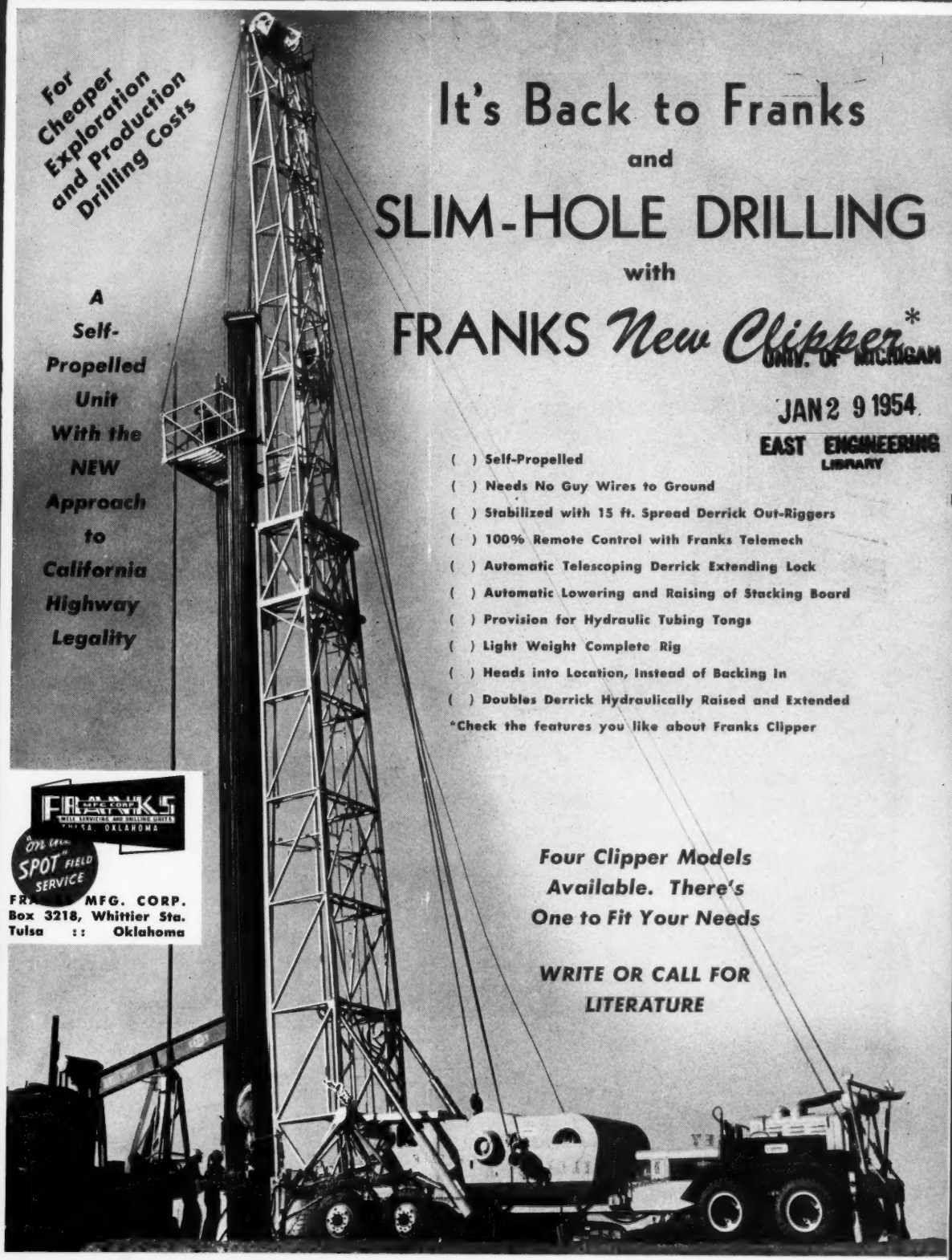

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# OIL WORLD

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2404 WEST 7th ST.
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KINZIE MILLER—Vice President
HOWARD F. McCLENAHAN—Cleveland Manager
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January 15th, 1954

# Natural Gas is Prime Constituent In Production of Ammonia

The growing necessity of petroleum in almost all phases of modern living is emphasized once more in the recent completion by Shell Chemical Corporation of a ten million dollar anhydrous ammonia plant at Ventura, California. This thoroughly up-to-the moment installation is in actuality the realization of that long time chemist's dream, "the fixation of atmospheric nitrogen." Its raw materials are natural gas, of which it will use some eight million cubic feet a day derived from the local oil fields, and nitrogen, which will be taken from the air. The uniting of these two elements to form $NH_3$ and the subsequent purification of the end product to a high concentration is a process that was initially perfected by Shell Chemical Corporation in 1931, and has since been the subject of continuous research.

A first plant was built in Pittsburgh, Pa., in that year and in the meantime, the burgeoning demand for ammonia and its products has required that the capacity of this original plant be increased at short intervals. Indeed, it eventually resulted in the building of the Ventura unit. The latter is designed to produce 150 tons of anhydrous ammonia per day, will use 1500 KW of electrical power, and will employ about 140 persons with an annual take-home payroll of $600,000. Seven hundred and fifty concrete pilings were used under foundations of major pieces of equipment and approximately 5400 yards of concrete and 7000 tons of steel were used in the plant construction. Among the operating equipment are nine compressors, totaling 8500 horsepower.

The plant site covers an area of 24 acres and is situated on North Ventura Avenue about three miles from the city. Besides anhydrous ammonia,

**Formal ceremonies Friday, December 11, marked the opening of Shell Chemical Corporation's new ammonia plant located about three miles north of the City of Ventura. The following day, Saturday, December 12, plant officials and employees held Open House at the 27-acre plant site and played host to citizens of Ventura and surrounding communities.**

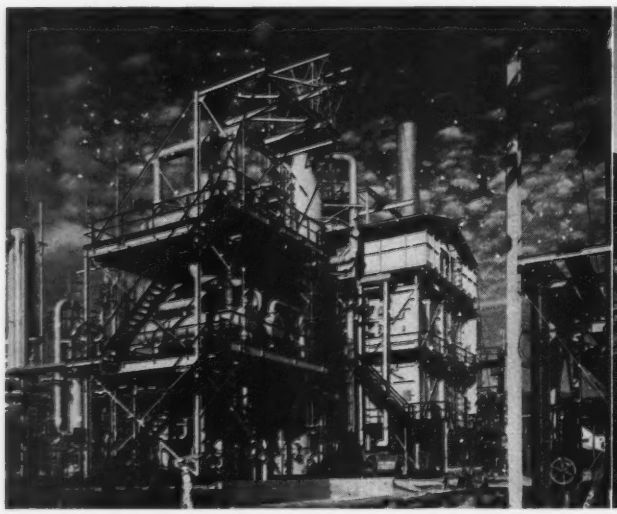
**This 180-foot building houses a battery of powerful compressors. The three in the foreground each of 2,000 horsepower compress synthesis gas to aid the chemical reaction between hydrogen and nitrogen. Oversized mufflers on compressor engines have been installed to reduce noise. Extra precautions have also been taken throughout the plant's construction to prevent atmospheric and stream pollution.**

it will produce ammonium sulphate and carbon dioxide gas. The latter will be sold to another concern for the manufacture of dry ice which will largely be used for beverage carbonation, fire extinguisher filling, and perhaps temperature reduction in refrigeration units of various sorts. Anhydrous ammonia and ammonium sulphate contain 82% and 20% respectively of nitrogen, and as every farmer knows, this ordinarily inert gas is very important to the growth of plant life. As a matter of fact, it has such a salutary effect on the nutritional processes that unless the subsurface of the plant area is treated with some powerful parasiticide before the building is begun, the almost infinitesimal leakage of gas is sufficient to make weeds pop up through oiled surfaces and cement chinks with disturbing abandon. If nitrogen were the only consideration in adequate crop cultivation, it is probable that rotation and other such expediencies that now plague the farmer, could soon be dropped. However, plants have many requirements and that sort of agricultural millenium is consequently not yet in sight.

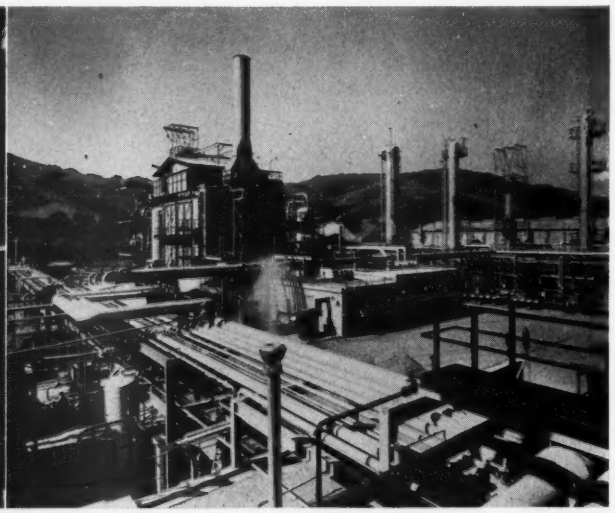
Besides pioneering the manufacture of anhydrous ammonia from natural gas and the other constituents mentioned, Shell Chemical Corporation has also pioneered the development of an application or utilization technique in the field. "Anhydrous," incidentally, merely means, "water free," which, of course, further means that the compositional elements must be present in greater concentration. The earliest effective application was contrived by absorbing the ammonia or ammonium salt in the irrigation water and thence spreading it over the field. This method was termed "nitrogation." All farms, however, are not irrigated and it thus became highly desirable to develop a method of directly injecting the ammonia into the soil. This, too, was accomplished in time, and the process now known as "nitrojection" was perfected. It consists of literal injection of the liquid ammonia into the earth from a series of nozzles after the ground has been broken up by a harrow. It is interesting to learn that the absorption of anhydrous ammonia by this means is complete and almost instantaneous. Experienced operators state that a device for the detection of minute quantities of $NH_3$, following along immediately behind the injection unit can't find a trace of the gas. The ammonia is actually handled in liquid form but volatilizes almost as soon as it strikes the soil.

Seventy per cent of the ammonia produced today is used for fertilizer, the remainder is employed in refrigeration, petroleum refining, processing of paper pulp, dye making, and in the manufacture of synthetic fibers, nitric acid, and explosives. Although ammonia has much the higher percentage of nitrogen and is easily assimilated by the roots of the growing plants, ammonium sulphate is also an excellent fertilizer and is in wide use where conditions are such that it is more economical to apply. It has been estimated, indeed, that for each dollar invested in nitrogenous fertilizer of the types mentioned, the normal return is from two to ten dollars. It is to be noted, however, that plants may be injured under adverse circumstances by overdosing with ammonia but in most instances the development of such circumstances can be easily avoided. Even when by some accident, plants are subjected to an application that is injurious, they usually just become temporarily retarded, and ultimately—sometimes in the following year—kick through with largely increased crops. This, of course, is not intended to indicate that the haphazard or unstudied application of ammonia still has its rewards. Actually, plants like people can have too much of a good thing, and agriculture is now an orderly process that recognizes limitations and laws just as do other scientific systems.

The manufacture of anhydrous ammonia from natural gas, steam, and air, is accomplished by rather simple means, excepting that it requires high temperatures and pressures, and con-



**Utilizing a process first demonstrated in Germany 40 years ago, the reaction of hydrogen with nitrogen is brought about to form ammonia ($NH_3$). By reacting methane or natural gas. with steam and air under high temperature in this Gas Reforming Unit, hydrogen-nitrogen mixture is obtained. Further processing purifies the mixture then forces the two elements to combine chemically.**



**Construction of the multi-million dollar Ventura plant maintains the position of Shell Chemical Corporation as the largest producer of anhydrous ammonia and ammonium sulphate west of the Rockies. Although essential in many industrial chemical operations, ammonia's principal use is in the field of nitrogenous fertilizers, greatly needed here in the West where soils are deficient in nitrogen.**

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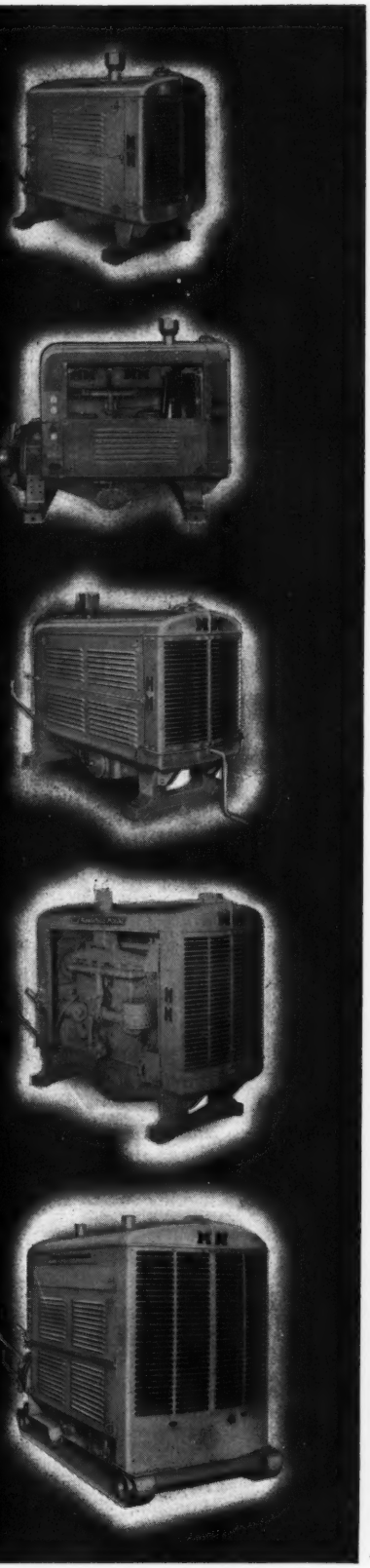

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sequently the species of equipment that will withstand these. First step in the plant routine is the preparation of an impure mixture of nitrogen and hydrogen, known as crude synthesis gas, by heating natural gas and steam in a reforming furnace at 1700° F., while they are passing over a catalyst, and while at the same time air is introduced at the top of the chamber. Hydrogen is derived from the gas-steam reaction and nitrogen from the air.

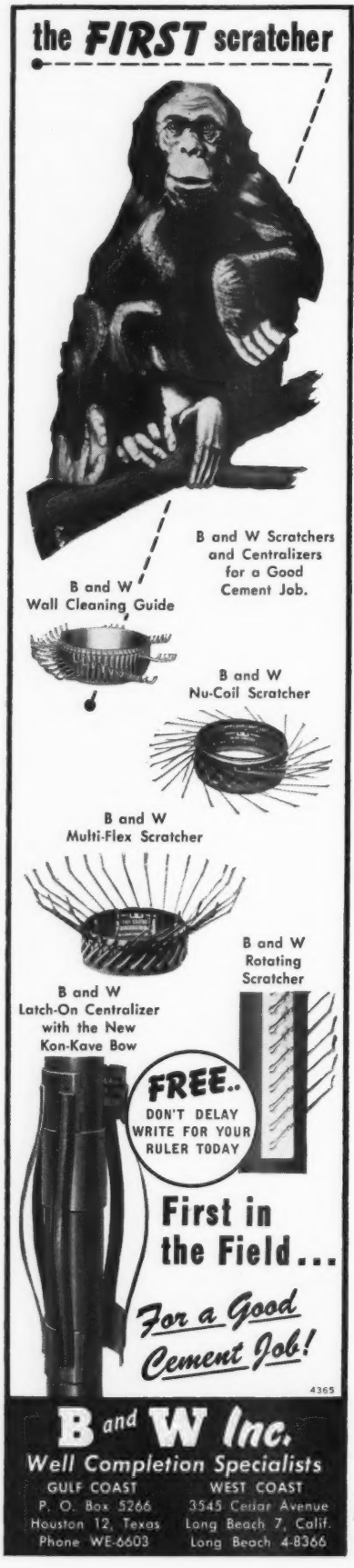
The main gas stream as it comes from the reaction chamber is quenched from 1700°F to 750°F and the heat so taken from the hot gas is used to make low pressure quench steam. The crude synthesis gas which does not yet contain ammonia but merely the elements (in an impure and uncombined state) of which it is comprised, is then compressed from 55 to 4700 lbs. per square inch and the impurities removed. These impurities are mainly carbon dioxide and carbon monoxide. The former is extracted in a tower in which it flows counter current to an absorbing agent, monoethanolamine, from which it is later distilled and eventually employed, as already remarked, for the manufacture of dry ice. The monoxide is removed by scrubbing the gas with copper ammonium acetate at 2600 lbs. per square inch, and finally washing it with caustic soda. The copper ammonium acetate solution is regenerated by boiling out the carbon monoxide at reduced pressure, the released gas being subsequently used in the plant as fuel.

The purified synthesis gas is compressed in four stages, with interstage cooling, to approximately 5000 lbs. per square inch. At this point the hydrogen and nitrogen are 99.6% pure, and under high compression and a temperature of 900°F., their combination to form ammonia is facilitated by the presence of a catalyst. It is interesting that initially only 20 per cent of the nitrogen and hydrogen react to form ammonia. This is then removed and the remainder is recycled through the catalyst. The gas is cooled as it comes out of the reaction vessel and the ammonia is separated and recovered as a liquid. This reaction chamber, needless to say, must be of very special construction and materials to hold up under such high pressure and temperature. Its walls are actually nine inches thick and, of course, all interconnecting valves and fittings must be correspondingly strong. Analyses of the gas streams are made continuously by automatic electronic instruments.

The finished product is stored in two globular tanks, each 65 feet in diameter, and believed to be the largest ammonia storage vessels in the world. They hold 2700 tons apiece and in them the ammonia is retained as a liquid at a pressure of 50 lbs. per square inch and a temperature of 39°F.

According to R. C. McCurdy, president of Shell Chemical Corporation, there are three primary reasons for the selection of Ventura as the location of this plant. First, California farmers last year purchased 750,000 tons of fertilizer, nearly double that used by all the Rocky Mountain states and California in 1942. Second, Shell's operations in Ventura provide an ample supply of natural gas for both the ammonia plant and other local industrial needs. Third, the area has a good supply of skilled workers. All of this, together with the increasing interest in scientific methods of crop culture, the expanding population of the West Coast, and the unquestionable virtue of the products involved, are reason enough for a decidedly optimistic view of the entire Ventura project and its prospects of future success.

There is an inclination on the part of many oil people to shrug off such so-called extraneous enterprises as too remote from the normal routines of petroleum operation to command their attention and interest. But, in reality, that is a mistake. There is nothing very remote about a process that requires as one of its principal raw materials, a petroleum constituent that it picks up right in the field, and uses there in considerable quantity. The manufacture of ammonia from a gaseous mixture, containing a high proportion of methane is a utilization that has broadened the whole scope of petrochemical development. Not only is ammonia a base material for the manufacture of many synthetic and derivative chemicals, but its employment for the improving of farm and orchard crops, although already spectacular, has scarcely more than begun. It is certainly not being over optimistic to expect that further benefits, even more pronounced than those we already enjoy, will result from longer experience and more research along these lines.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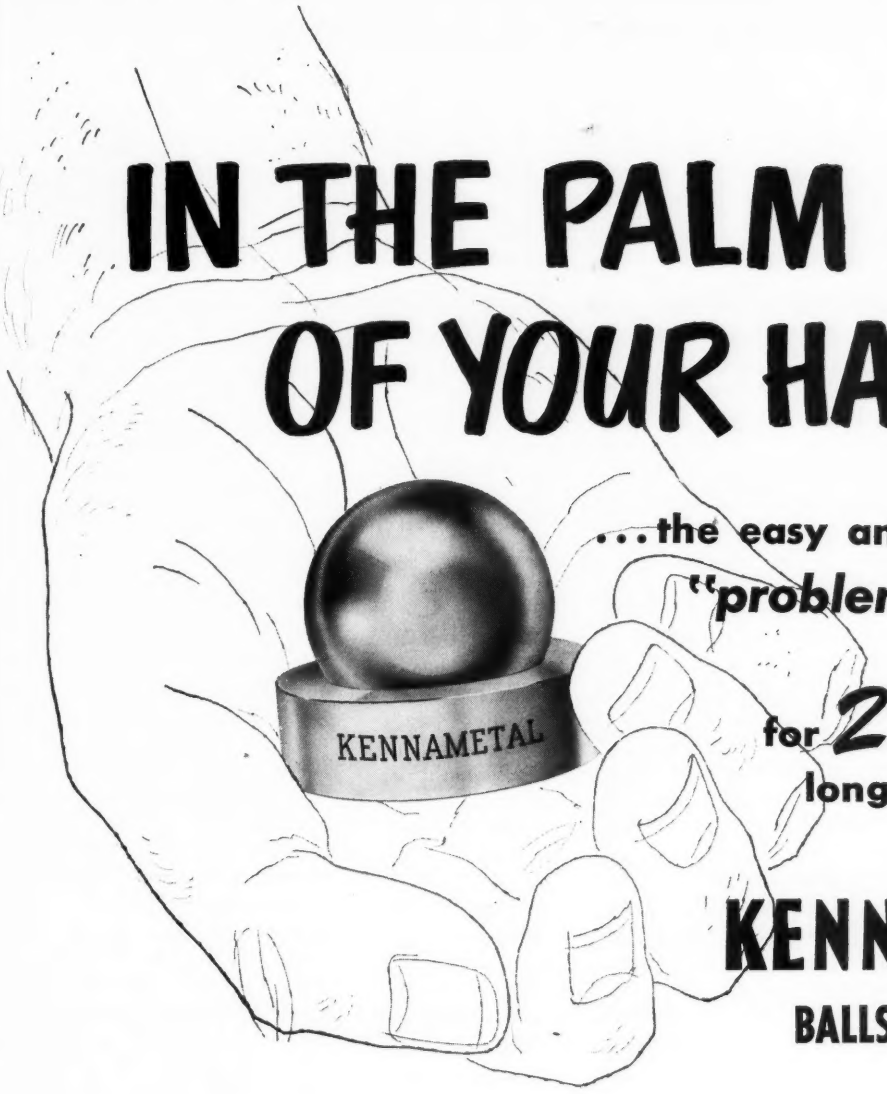


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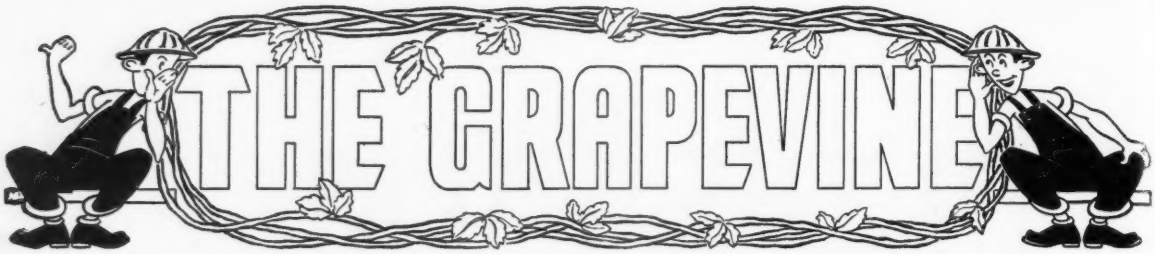


We have recently been apprised of two of the greatest fishing stories of modern times, both of them involving well known oil people. The first one concerns the Hawaiian piscatorial exploits of one, Ted Sterling, successful operator around the Castaic and other California fields. It seems that Ted's angling yen until comparatively recently had been confined to mountain brooks and speckled trout, and he merely went down to Hula Hula land in the hope of catching a bigger fish than his son-in-law who had landed a 183 pounder a few years ago and consequently rated No. 1 fishingwise in the Sterling household—a humiliating situation for the titular head. In any case, he scampered down to Honolulu some months ago and found that he had arrived just in time for the annual halawai of the Hawaiian Big Game Fishing Club. This is a two day frolic during which the waters around the Islands are whipped to a froth by experts from almost everywhere, as they contest for honors and prizes in a stash of finny events.

**Ted, originally, of course, merely wanted to try his hand at the growingly popular pastime and his skipper, Henry Chee warned him that there hadn't been a fish caught in the Islands for over two weeks. Next day, when the neophyte brought in a 200 lb. marlin, Chee was so elated that he entertained Ted in the halawai, and what he did thereafter should make some people we know blush a deep, dark vermillion. He could only use Chee's boat for one day as it had already been booked for the other, but that was all the time this petrolic Zane Grey needed to capture four major events and become the fishing champion of the Hawaiian Islands. Here are his several triumphs: First in the marlin class with a 360 pounder; first in the ahi (tuna) class with a 120 pounder; first in the mahimahi (dolphin) class with a 60 pound bull; and first for coming nearest to an existing world record in any class—that was with his dolphin which weighed within 15 pounds of the biggest one ever caught.**

We would like to point out at this stage that he could very easily have been given another prize, for the poundage of his winning sprats was tastefully distributed in even multiples of 60, and we doubt if, considering the varieties involved, any other fisherman has ever arranged his catch in such a neat pattern of arithmetical progression. Needless to say, in view of his outstanding accomplishments, Ted now holds more decorations and distinctions than a Russian general. He has been dined and wined **ad infinitum** by the world's best bait danglers, and has been practically crowded out of his home by the trophies that were awarded to him. Also, although he didn't say so, we rather imagine that the profound silence you can't hear right now, is coming from the son-in-law who ruled the rod and reel department of the Sterling household long and volubly with his puny 183 pound catch.

**The second story concerns the recent Stark expedition to Peru, and tells how Herb Stark, Honolulu Oil Corporation's general superintendent up Taft way, lost his prestige and has since become vaguely known as "Mrs. Stark's husband." It appears that Liz Stark, is really a marlin fisher of the A class and has hooked not a few of the tail walking beauties at other times and in other places, but the baby she landed at Cabo Blanca in Peru on December 4, 1953, gave her the biggest thrill she had had since the day she landed Herb. It weighed 1015 pounds and goes down in the international record book as the biggest black marlin ever caught by a woman. It measured 14 feet 5½ inches in length, took 40 minutes to bring to gaff, and when it was pulled out of the water, the ocean sank two inches. Whereat, our hearty congratulations to Mrs. Stark and our best wishes for her further success in the big game fishing business. As for Herb, in the hope that it may restore some semblance of his former greatness, we might say that during the entire exciting performance he remained completely calm, snapping photos of the event from all angles. He was so calm, indeed, that he never noticed that his thumb was over the camera lens. When the films were developed, they showed that, beside being the biggest black marlin ever caught by a woman, this was the blackest black marlin. What's more, the photos would indicate that it had been caught on a very dark night—so dark as to obscure everything. But leave us say this, and it will undoubtedly cheer Herb no end—he did catch the bait that caught the marlin.**

We are blushing to the very roots of our missing hair since Les Evans, capable assistant to the president of Emsco Manufacturing Company, returned some time ago from Texas, protesting like Mark Twain, that the report of his demise in the PPP roster was grossly exaggerated. Having shaken his hand recently and partaken of his hospitality, we can vouch for the fact that the

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**He is a native Angeleno, born some years ago at the corner of 48th and San Pedro Streets. He attended Los Angeles high school and thence migrated to U.S.C., from which he emerged in 1938 with a degree in chemical engineering and the lightweight wrestling championship. Immediately following his graduation, he went back to the Jones & Laughlin plant at Pittsburgh where for the next year he studied practical metallurgy and the intricacies of steel manufacture. In 1939, he returned home, married Peggy Fitzgerrell, started work with Hillman-Kelley, and has been eminently happy with both attachments ever since.**

**Businesswise, he has specifically applied himself to the study of manufacturing methods and sales distribution. He is at the present time president of Contract Manufacturers' Corporation, and a partner in the Hillman-Kelley organization. Extracurricularly he has five children, ranging in ages from 6 to 13, and his interest in the younger set was pretty well established recently when he helped Monsignor Alden Bell of St. Vibiana Cathedral to stage a television Christmas party for his junior parishioners.**

**Jim is an unique individual in that he has never been a member of a smog committee. He is, however, a member of the University Club and the Petroleum Club of Los Angeles, for which latter he recently engineered a daring safari into Brea Forest that was enjoyed thoroughly and will be long remembered by a host of oil people. The accompanying illustration shows him in full safari regalia. He is also a devoted follower of the unpredictable bobtails at Santa Anita, and in his more reflective moments, that is, after he has torn up his pari-mutuel tickets, he finds solace in floriculture and other such relaxing pursuits in the garden of his home in San Marino.**

---

gentleman is very much alive, and we apologize abjectly for suggesting otherwise. Incidentally, we wonder just how often that Mark Twain crack has been quoted under similar circumstances. Mr. Clemens was the originator of some mighty amusing comment on this and that and we have long admired his ability to brighten a dreary debate with unexpected bits of scintillating wit. During the uncertainty that raged for a while in literary circles as to whether Shakespeare or Bacon wrote the plays for which the former is now given full credit, he was asked for his opinion in the matter. "Confidentially," he replied, "I don't believe William Shakespeare wrote the plays. I am convinced that they were written by another man of the same name."

**We note that among others, Elmer Decker, noted son of Otumwa, and Lester Callahan, skipper of the Alician and senior partner of the Wood-Callahan Oil Company, both of Long Beach, were recently the prospective victims of an extortionist who attempted to wangle $10,000 each out of them to pay his way through college but, like the fabled Scotch earthquake, failed to shake anything loose. It is some time since we visited with the Long Beach weight indicator baron and his business buddies, but we shall hope to interview him one of these days so that we can let his panting public know how he felt during this horrific adventure. Frankly, we can't imagine Elmer Decker being anything but amused by the affair. He is not the kind who would get fluttery under the threats even of a confirmed thug, much less the synthetic bravado of a poor misguided school kid. Anyway, we are pleased that it all ended without mishap and we hope that the scheming college boy has learned the Dragnet moral that crime doesn't pay—anyone, that is, excepting television actors.**

A brief note from Ray Upton of Drillex, tells us that he is off to Brazil to stay for two more years at Para, whence he had just been home recently on a short leave of absence. Ray asks us to give his regards to his friends in PPP and we are glad to do so through this column. He still hopes to foregather with the gang at one of the barbecues but has had difficulty in making it so far. Anyone who would like to contact him may do so at Caxia 862, Belem, Para, Brazil, S.A. Which reminds us that Stan Martin is now comfortably settled in Piura, Peru, for Union Oil Company, and is liking the adventure fine. Mrs. Martin expects to join him there in about a couple of months. Meantime, Stan can be reached, c/o Union Oil Company, Apartado 6, Piura, Peru, S. A.

**Just elected to the board of directors of PPP are two noted seniors F. C. Ripley, Sr., former manager and director of CCMO, and one of the industry's best known pioneers; and A. L. Tietze, retired Standard of Cal production executive, who has also had a long and colorful experience in Pacific Coast oil. New junior directors include Ken Faulkner, the Wildcat thespian who between High Jinks functions as a production biggie for The Texas Company; Tom Hickey, Jr. of Hickey Pipe & Supply Company, scion of a noble house, and a pretty substantial sort of a lad himself; R. R. "Robbie" Robison, premier member of the Ventura Rest &**

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Full Circle Releasing Bowen Spear

Bowen Safety Joint

Bowen Bumper Sub

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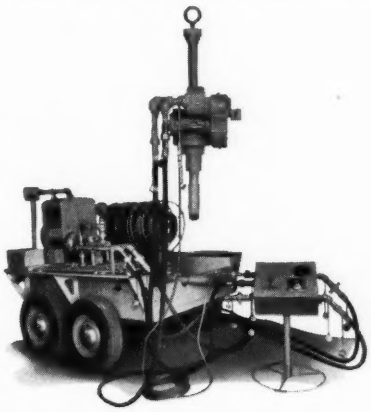
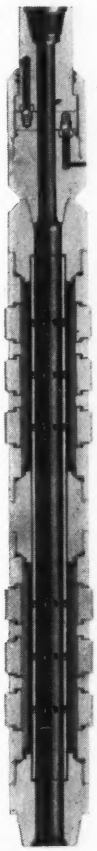
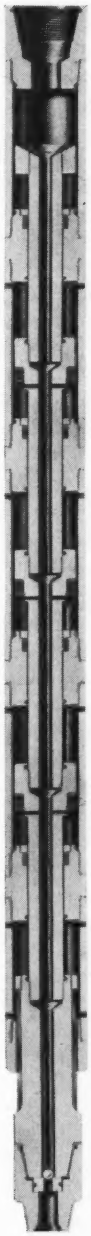


Bowen Powered Swivel



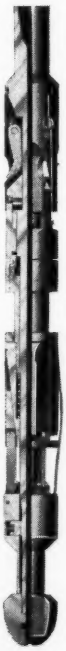
Anchor Section

Bowen-Wilson Pulling Tool



Pulling Section

Bowen-Wilson Pulling Tool

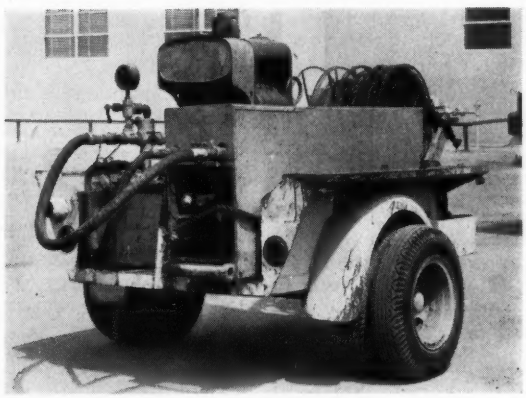


Bowen Internal Cutter

Bowen Stop Sub



Bowen Extension Sub



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**Aspiration Club and San Joaquin Valley production chief for Shell Oil Company; Harry Buchanan, vice president of Bell & Burden, Inc., also a member of a famed oil house and one of the petroleum industry's better drilling engineers; Carl Engel, head of his own oil trucking firm, Engel & Gray, and a favorite citizen of Santa Maria; and last but certainly not least, G. S. "Duke" Follansbee, Jr., reelected for another term after doing a bang up job as treasurer for several years. And speaking of pioneers, we note that Dad Wilcox, the erstwhile Byron Jackson inventive genius, celebrated his 87th birthday on January 14. Dad has been in some phase of oil work since 1884 which makes him a 70 year man and puts him in the class of A. E. "Enrique" Fowks, which in our opinion is mighty high class. Many happy returns, Dad!**

Our Ventura friend, Verne Zacher, formerly mud engineer for Tide Water Associated Oil Company, has entered into private practice as a consultant at 1241 Thompson Blvd. Verne ought to do right well as an advisor on completion fluids and completion procedures generally. He has a good academic background coupled with a wealth of experience that together enable him to speak with the voice of authority. He has been attached to the mud business in a very practical way almost since its inception and there is little of its ramified characteristics with which he is not entirely familiar. He has written widely for the trade press, has spoken frequently at gatherings of technologists, and is well known as one of the pioneer developers of mud testing equipment and application techniques. Completion fluids are not more important anywhere than they are in the Ventura oil fields, so Verne is hanging out his shingle in an area where his services should be much in demand.

**The foreign mail lately brought a billet-doux from Jack Ballagh, in Lima, portraying a somewhat voluminous Peruvian lady, demonstrating what is likely to become of our own lassies if they don't stop laminating their chassis with multiple layers of petticoat. He is a little late to be telling us personally about it, but he states that there are excellent opportunities for young people down there. Frankly, we are no longer in need of new opportunities, all we ask for now is a modicum of energy with which to take care of the old ones. By the way, we could have reported all of this sooner if the Lima postal people hadn't banged their cancellation stamp down on the Ballagh signature, in consequence of which it took us a couple of weeks to discover that the message was actually from the Jet Lube Gulliver.**

Also in the foreign basket a short time ago was a letter from that night-blooming narcissus, Carlos Rudolpho Schneider, of Mexico City, who never sleeps when he is away from home and expects everybody else to stay up with him. After attending the Nineteener Calcutta at Del Mar back in October, Carlos visited his grandson at Culver Military Academy, accompanied by the Senora Schneider and their daughter who had also flown up from south the border. Thence they migrated to Chicago and in no time at all, found themselves caught up in the API stampede, which Charlie had forgotten about. The ladies wisely took off for New York and presently Charlie was again surrounded by such worthies as Monte Lindmoe, Hans, Ross, Johnny Robinson, Charlie Perkins, Joe Taylor, Bill Beck, Bill Conroy, Wendell Jones, Dutch Zwerneman, and a raft of other Nineteeners. Last we heard was that the officers of the organization were petitioning the government to have the suave Carlos deported back to Mexico so that its members might get a few hours of shut-eye before they collapse from sheer exhaustion.

**By way of last minute roundup, John J. O'Keefe has decided to settle down on home soil, and has opened an office as a consulting engineer and geologist at 822 East Compton Blvd., Compton. Ox Morgan has joined Falcon Products, Inc., as general manager. Archie MacDonald is off on another globe girdling jaunt. Maury Machris is to have a showing of his African safari pictures at the Ebell Club on the evenings of February 4 and 5. Don't miss the opportunity to see them—we hear they are wonderful. Meantime, a Happy New Year, and congratulations to all of those who have read this far.**

---

## Companies to "Flood" Dominguez Field

The first large scale cooperative water flooding program ever to be operated in California has been started at Dominguez oil field in Los Angeles county by Union Oil Co., Shell Oil Co. and the Dominguez Oil Fields Co., it was announced jointly recently. The program is expected to add substantially to the known crude oil reserves of the field.

This secondary oil recovery operation in which water is used to flush the oil sands is the direct result of successful pilot tests made at Dominguez by Union Oil, plus engineering studies and appraisals by the three companies during the past two years.

Approximately $1,400,000 will be spent for drilling and well repair operations, plus an additional $350,000 for water treating and injection facilities. All of the investment costs and subsequent operating expenses will be borne by the three companies.

Plans call for the cooperative water flood of the "First East Central Fault Block embracing the Hellman and Reyes properties," according to H. D. Aggers, Manager of Secondary Recovery Operations for Union Oil Company.

"It is planned to utilize existing producing wells and new wells to develop a modified pattern flood," explained Mr. Aggers, "Ultimately, 19 wells, including six new wells, will be used for water injection purposes, and 15 wells, including one new one, will be used as oil producers."

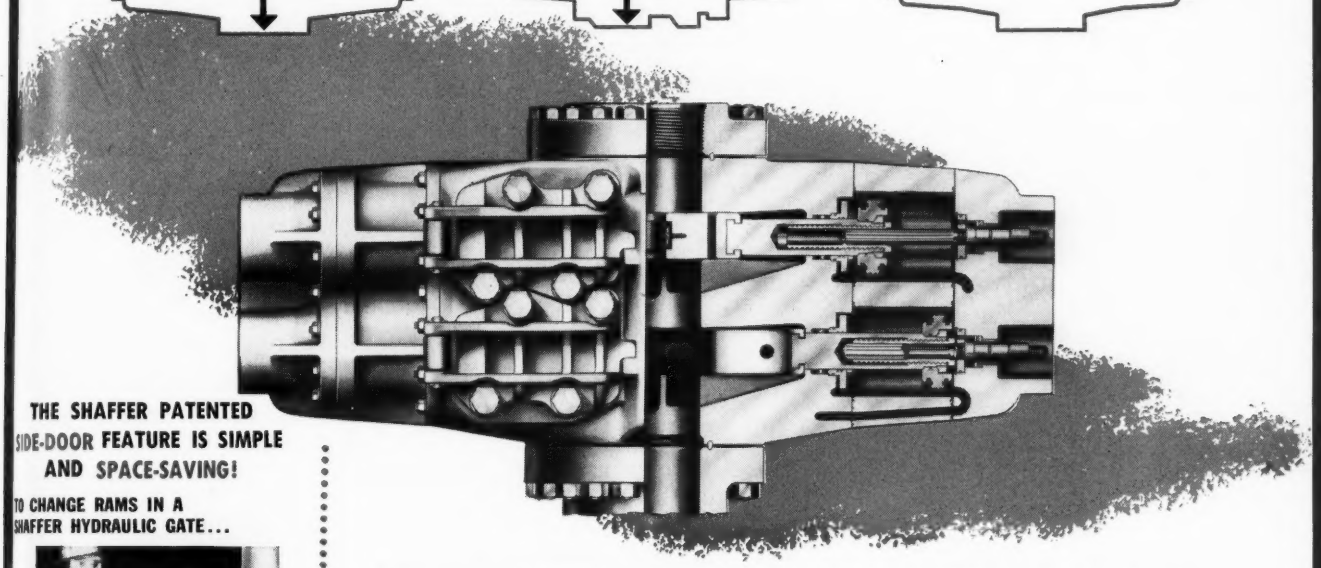
# *In Shaffer Hydraulic Cellar Control Gates*

# YOU GET COMPACTNESS THAT COUNTS

in height

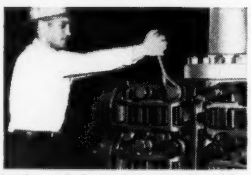
in width

in length



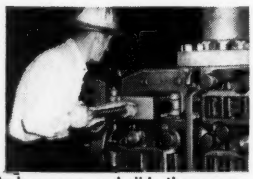
**THE SHAFFER PATENTED SIDE-DOOR FEATURE IS SIMPLE AND SPACE-SAVING!**

**TO CHANGE RAMS IN A SHAFFER HYDRAULIC GATE...**



1. Simply unbolt and open the side door...

2. Slide out the ram assembly...



3. Replace rams, and slide the assembly back in place...

4. Close and bolt the door.

Closing the door automatically aligns the ram assemblies in the gate body!

**It's the simplest, fastest—and most space-saving design available. And complete ram changes can be made with pipe in or out of the hole!**

Compactness is something to *double*-check when you buy cellar control gates. *Why?* Because overall dimensional data that *seems* comparable may not be at all similar on closer inspection.

***For example*** — the Shaffer Hydraulic Double Cellar Control Gate in sizes as large as 13⅜" (12" Series 900) has an overall length of less than 89". (Smaller sizes even less.) This length is fixed — *there's no need to add additional cellar space to allow for opening and extending the gate in order to change the rams!*

Shaffer rams are quickly and easily changed through *side-opening* doors that open along the *minimum* horizontal dimension of the gate — therefore do not add extra space to the critical longest dimension of the unit!

***Another space-saving advantage*** made possible by the patented Shaffer *side-door* feature is that no added space need be allowed *above* Shaffer Gates in order to change rams. You can mount Shaffer Hydraulic Cellar Control Gates even in cellars with minimum height and not have to worry about "working clearance" above the unit to allow for ram changes . . . because the rams are changed from the *side* — not from the top!

***REMEMBER*** — **the two most critical dimensions of a cellar control gate are length and height. Shaffer Hydraulic Cellar Control Gates do not require added space in either of these dimensions in order to change rams — a vital space-saving advantage that makes Shaffer compactness really mean something!**

**And compactness is only one of *many* unequalled advantages found in Shaffer Hydraulic Cellar Control Gates. Before you buy *any* cellar control gates, get the complete Shaffer story from your nearest Shaffer representative. Or write direct!**

***See your Composite Catalog for further data on Shaffer Products.***

**Send for your free copy of the complete Shaffer Catalog.**

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# Rocky Mountain NEWS

**Colorado—Idaho—Montana—New Mexico—Utah—Wyoming—Western Canada**

## Wyoming

Sinclair Oil and Gas Co.'s Happy Springs Unit No. 23 has been completed in the Phosphoria for a rated production of 1920 barrels of 30.5 gravity oil per day. The Phosphoria is the fifth pay horizon in the unit. The well topped the Phosphoria at 6170 feet, was drilled to 6505 feet feet but was plugged back to 6292 for completion. It is located in se nw sw 4-28n-93w in Fremont County.

True and Brown are producing the VR Ranch B-1, c ne ne 26-33n-76w, in Converse County, at a rate of 145 barrels per day from the Dakota. This well, which is bottomed at 5892 feet, is three quarters of a mile east and a quarter of a mile south of the J. G. Dyer State 23-1, which was completed in the Muddy. The Dyer well was dry in the Dakota, Canada Southern Oils Inc. is the operator, and has drilled a successful confirmation, the Dyer 23-2 to the west, which was completed for 218 barrels per day. The company is preparing to produce a second confirmation, the Canada Southern No. 3 State Macauley.

At Skelton Dome in Hot Springs County, the Pegasus Division of Socony-Vacuum was drilling below 6800 feet at the No. F-44-25-G, c se se 25-45n-100w. Slight shows of oil have been found. The test is on an 8970 acre block unitized by Socony-Vacuum.

Superior Oil is drilling a second test in the West Mahoney area of Carbon County after drilling one tight hole. The new test is the No. 27-30 Gov't., ne sw sw 30-26n-88w, a mile and a quarter north of the same operator's No. 21-6 Govt., ne nw nw 6-25n-88w. The tests are three miles west of Mahoney Dome, which has production from the Tensleep.

## Colorado

The California Company was preparing to test after finding shows in cores of what is believed to be the J sand at the No. 1 Winder, c sw ne 4-6n-67w, in Weld County.

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**The day you equip your well with a JENSEN Pumping Unit you can start putting more money IN your pocket.**

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Wildcatting activity in Baca County, in the southeastern part of the state near the Kansas line, has been stepped up as a result of the successful drilling of an extension to the Greenwood gas field of Kansas. Amerada Petroleum and British-American Producing were continuing to test the extension, the No. 1 Neu, se se nw 33-32s-41w. Amerada has staked locations for two tests, one to the northeast and the other to the southwest of the extension, and Carter Oil has made location for a test farther west.

Ohio Oil Co. and C. C. Thomas plugged back to test the Greenhorn at the No. 1 Nordloh, se se se 20-5n-63w, in Weld County after deepening the well to the Lyons. The test is in the southern part of the Denver Julesburg Basin.

## Nebraska

Ohio Oil Co. has completed the No. 1 Engelland, se nw se 33-15n-49w, Cheyenne County, for a pump gauge of 250 barrels of oil per day. The same operator also has completed the No. 1 Fleming, ne ne nw 28-13n-50w, also in Cheyenne County, for 84 barrels of oil per day on pump, five per cent water cut.

Stanley T. Kiespert was last reported pulling core at a depth of 6158 feet at the No. 1 Long, nw nw se 10-12n-55w, in Kimball County. In a core taken of the interval 6135-50 feet, saturated sand was recovered. Attempt to drill stem test failed, and operator cored ahead. The well is in the Long area, which has been productive from both the D and J sands.

## New Mexico

Superior Oil Co. has announced locations for two wildcats in the San Juan Basin. In Rio Arriba County, the company will drill a

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7500-foot Dakota test, the No. 1-7 Sealy-Govt., nw se sw 7-25n-6w. The No. 25-14 Govt., ne nw sw 14-14n-8w, will be drilled on San Mateo Dome in McKinley County. It is scheduled to go 6100 feet to the granite.

A sale of tribal lands in San Juan County brought bids from a large number of companies, with a total of 158,980 acres auctioned for a total bonus bid of $2,906,907. Stanolind Oil and Gas Co., which offered $83.29 per acre, for two tracts, was the high bidder. Average price for the entire sale was $18.40.

## Montana

Carter Oil Co. was drilling around 5920 feet at its No. 1 Mason, scheduled as an 8500 foot test of the Devonian. The well, in c ne ne 20-29n-50e, is in the West Poplar area of Roosevelt County.

Stanolind Oil and Gas Co. was drilling below 900 feet in the Ordovician, with no shows yet recorded, at the No. 1-C NPRR, c ne nw 15-9n-58e, North Pennell Creek, in Fallon County.

Shell Oil Co. was drilling at 9250 feet at its Cabin Creek confirmation, the No. 11-33 NPRR, se nw nw 33-10n-58e, in Fallon County. Shows have been found on drill stem tests. The confirmation is a half mile northwest of No. 22-33 Unit, discovery in the area.

## North Dakota

Carter Oil Co. was coring at 8950 feet at the No. 1 Lockwood, c se nw 6-141n-94w, after recovering a foot of free oil on a drill stem test at 8930-50 feet. Four feet of oil-cut mud and 719 feet of salt water also were recovered. The well is in the Carsin area of Dunn County.

Three miles south of the Beaver Lodge field in Williams County, Amerada Petroleum completed the No. 1 North Dakota F, c nw nw 36-155n-96w, for 616 barrels of 42 gravity oil per day through 15/65 inch choke. Production is from the Madison at 8317-57 feet.

## Western Canada

A maximum flow of 25,000,000 cubic feet of gas per day was estimated at the Marengo No. 1 of Phillips Petroleum and Husky Oil. The well in lsd 10-26-28-27 w3, is 20 miles southwest of the gas discovery well in the Smiley field of Saskatchewan. Top of the Viking was logged at 2478 feet, and the test was of the interval 2492-2505 feet.

Gas Exploration Co., Canadian Admiral Oils and Charter Oil Co. have entered into an agreement pooling northeastern British Columbia land holdings. Gas Exploration's holdings are increased to 823,878 acres in that part of the province, and Canadian Admiral's interest now extends to 472,844 acres. Charter's holdings now amount to over 2,500,000 acres in the area.

McDougall-Segur Exploration and Associates planned further testing of their Olson 21-13 in the Camrose area of central Alberta after recovering 1500 feet of clean oil from the Viking sand. The test was at the interval 3205-13 feet. Recovery also included gas at an estimated rate of 50,000 cubic feet per day. The well is on a farmout from Sun Oil Co.

Anglo-Canadian Oil Co. was preparing to drill a second well in the Woodbend area of the Leduc-Woodbend field after indications that the Anglo South Woodbend 3-2 would be a producer both from the D2 and D3 Devonian. In a test of the D3, pipe recovery was 1800 feet of clean oil, and there was a flow of 117,000 cubic feet of gas per day. There also was an encouraging showing in the D2, and operator was acidizing in the zone.

After Jan. 31, 1954, all oil wells in Saskatchewan will be under specific production controls. Regulations recently issued require that no oil well shall be produced until a production allowable has been established for it. Initial production tests are excepted from the regulation. A maximum production allowable will be set within 14 days after an application has been filed. If an operator does not receive notification of the allowable within that period he may produce at his requested rate until so notified.

Imperial Oil is taking preliminary steps for the construction of a $10,000,000 lubricating oil plant to be constructed at Edmonton. The plant will have a productive capacity of approximately 750,000 barrels a year.

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**To serve customers better in Montana, Lane-Wells Company has opened a new sales office at 111 North 30th Street, Billings, Montana, telephone 99984. Don Bishop has been transferred from Casper, Wyoming as district sales engineer. This will bring the total of sales and service branches to 75 in the United States.**

## New Company Enters California Development

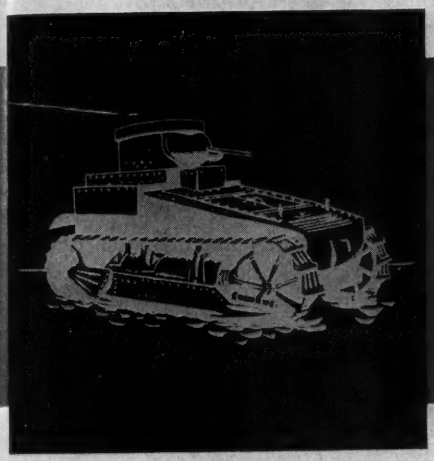
All oil producing activities of the Artnell Company in California have been taken over by the recently organized Artnell Oil & Gas Company, Inc. A. C. Allyn, president of the new company, announced this in Chicago. New offices have been opened in Coalinga by Artnell Oil & Gas, with W. W. Holmes, vice president in charge. Guy Hannegan is company geologist. More than 20,000 acres of producing and leased property are held in Los Angeles, Kern, Fresno, Kings, San Benito, Sacramento and Yolo Counties, Allyn made known. He said that the Artnell Company will continue to carry forward its operations in other parts of the country. Allyn is a partner in the investment firm of A. C. Allyn & Company in Chicago.

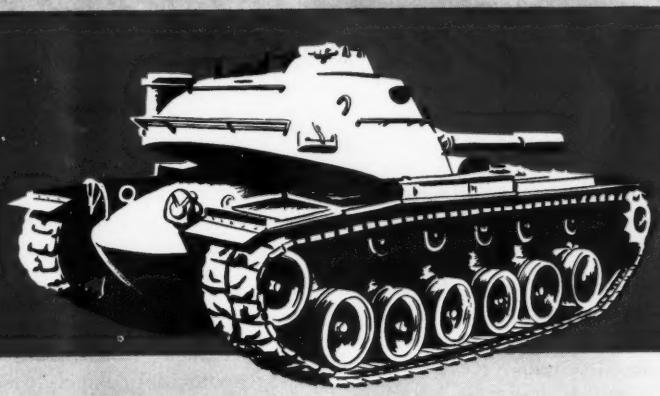
## Brown Drilling Keeps Adding Wells

Ned Brown, owner of Brown Drilling Company at Long Beach, reported that during 1953 it took down 96 wells in California for a total footage of 500,989 feet. Since 1937 the contractor has drilled a total of 931 wells in the state for 3,686,464 feet. The company with associated interests also has completed its 49th producing well in Texas. The Australian exploratory hole which turned up the first commercial oil in that part of the world is a Brown Drilling Company contract job.

# DON'T BUY AN OBSOLETE RIG!

## A JAW CLUTCH TRANSMISSION RIG IS OBSOLETE!





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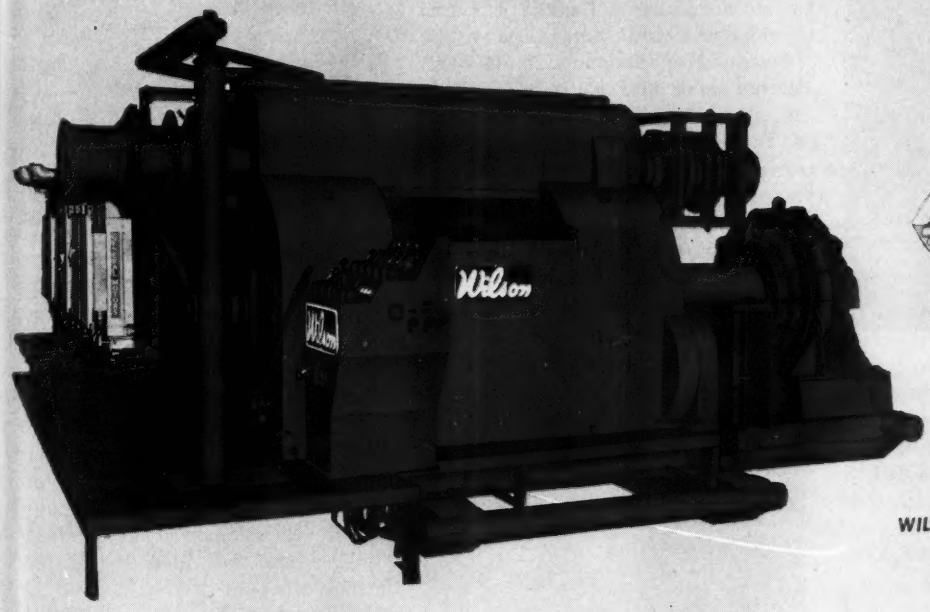
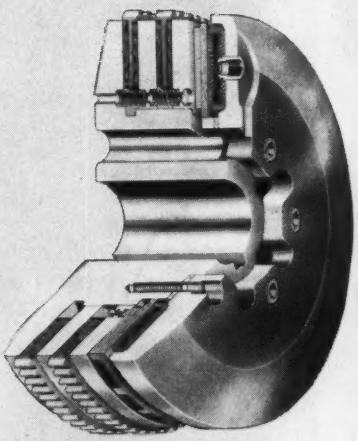



WILSON TITAN RIG



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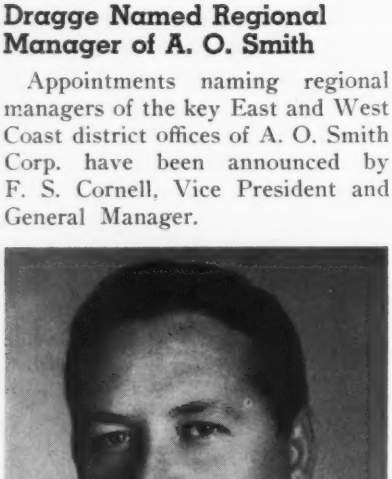
# Personalities IN THE NEWS

## Dragge Named Regional Manager of A. O. Smith

Appointments naming regional managers of the key East and West Coast district offices of A. O. Smith Corp. have been announced by F. S. Cornell, Vice President and General Manager.



**Allen O. Dragge**

Walter W. Stake, formerly assistant general sales manager for the Permaglas-Heating Division stationed in New York, has been named regional manager for the Eastern District. He succeeds the late Russell J. Irish, who headed the New York office. Mr. Irish, well known in both East and Middle West, died suddenly Oct. 28.

Allen O. Dragge, who has had jurisdiction over the West Coast operations, now has been named regional manager of the Pacific Coast District for A. O. Smith. The offices are at Los Angeles.

Mr. Stake, who has been with A. O. Smith since 1945, came to the company at the time A. O. Smith became exclusive distributor for products of the Burkay Co. of Toledo. He has been in the New York offices since that time.

Mr. Dragge, before he joined A. O. Smith in 1947, was in the securities business in Milwaukee with Robert W. Baird & Co., Inc. His several positions of increasing sales responsibility since then have all been within the Pacific Coast Division of the company.

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G. R. Winder, Vice President and General Sales Manager, and K. K. Knutzen, Secretary, Treasurer, and Comptroller of Chiksan Co., have returned to Brea after a two weeks trip to Chiksan of Canada Ltd., a subsidiary of Chiksan Company.

During their stay in Canada, Mr. Winder and Mr. Knutzen visited the Edmonton and Calgary offices of the Canadian subsidiary, and called on major customers and prospects with Jack Runnells, Western Canadian District Sales Manager, and David Cormack, Sales Representative. Stops were also made in Seattle to visit E. C. Griffin Co., a Chiksan Representative, and at Chiksan's Oakland office in charge of Hal Stock.

Mr. Winder stated on his return that business prospects in Canada appear excellent and progress is being made in completing pipe lines to Western Canadian ports for the movement of gas and oil produced in the interior.

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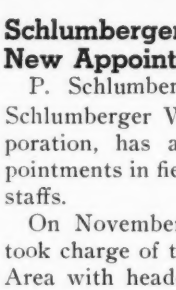
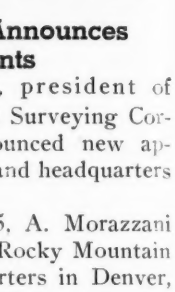
If you wish to know all about The Texas Company, read the new book, "The Texaco Story — The First Fifty Years," written by Marquis James, Pulitzer prize-winning biographer. Mr. James traces the growth of the company which in many ways typifies the great American success story, the little man free to fight his own way up and challenge the biggest and best successfully.

## Schlumberger Announces New Appointments

P. Schlumberger, president of Schlumberger Well Surveying Corporation, has announced new appointments in field and headquarters staffs.

On November 15, A. Morazzani took charge of the Rocky Mountain Area with headquarters in Denver, replacing Paul D. Chabas who became manager of headquarters services in the Corporation's office at Houston.





**Morazzani-Steward**

Mr. Morazzani, formerly manager of the Northeast Area, came to Schlumberger in 1937. A native of France, he received his education in engineering at Ecole des Arts & Metiers of Paris. He spent two years in South America in similar work before joining Schlumberger. Mr. Morazzani served as field engineer in Louisiana, Texas, and Illinois, where he opened the Mt. Carmel office in 1939. In 1945 he was transferred to West Texas where he became manager at Midland for the Permian Basin Division. He returned to the Northeast Area in 1951 as Area Manager, establishing new offices at Evansville, Indiana.

The new manager in the Northeast is J. E. Armstrong. Mr. Armstrong, a graduate of Trinity University and Rice Institute, has been assistant area manager at Evansville, Indiana. He joined Schlum-

berger at Lake Charles, La., in 1934. During the war he spent three years in the armed forces and returned to serve in Louisiana until he was transferred to Illinois in 1949.

At Houston headquarters, W. B. Steward, formerly head of the administration department was appointed administrative assistant to the vice president of engineering. Mr. Steward is a graduate in physics of Pomona College of California, and obtained a masters degree at Dartmouth College, and Ph. D at Ohio State. He was employed by Schlumberger, in 1935, working in West Texas and Pennsylvania before being transferred to the Houston Headquarters in 1938. Until 1943 he was primarily concerned with field development of the Corporation's perforating equipment. In the engineering department he also worked on equipment modifications and improvements. In 1948 he became head of the administration department. In this position he was directly concerned with the building of the new headquarters and manufacturing plant in Houston. His new position returns him to engineering service.

Paul D. Chabas began his career with Schlumberger in 1934 after several years in exploration and consulting work in France and Russia. He is a graduate of Ecole Superiure de Electricite' of Paris. One of the first engineers employed by the Corporation, he set up the first office in West Texas at Midland. He was transferred to Louisiana in 1935 as district manager at Lake Charles, and later served in the same capacity at New Iberia, Houma, and Houston. In 1946 he went to Casper, Wyoming as assistant division manager and in 1948 moved to Denver as assistant manager for the Rocky Mountain Area. He was promoted to area manager in 1950. In his new position as manager of headquarters services at Houston he is responsible for functioning of communications, reproduction and other service sections at headquarters, and for maintenance of the Corporation's huge new plant and other properties at Houston.

G. K. Miller, formerly associate development engineer, went to the Schlumberger Research Center at Ridgefield, Conn. on November 15, as assistant to the research department head. A graduate of Purdue University in electrical engineering with a master's degree in communications, Mr. Miller was employed by Schlumberger for research work in 1941. During the years from 1942 to 1946 he was transferred to Electro-Mechanical Research, a Schlumberger subsidiary, where he worked on war projects undertaken for the federal government. Since 1951, until his new appointment, he has been associate development project engineer concerned with the electrical engineering of Schlumberger equipment.

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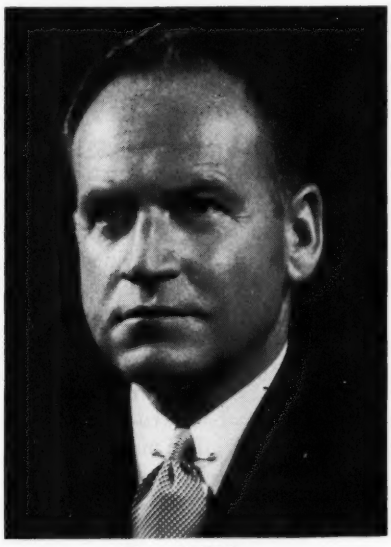
## H. A. Jackson Appointed to Head Eastern Division of Tide Water Associated Oil

Harry A. Jackson has been appointed a Vice President and Chairman of the Operating Committee, Eastern Division, Tide Water Associated Oil Company, according to an announcement released by President D. T. Staples. Jackson succeeded Drew L. Hines whose request for retirement has been granted by the Board of Directors. The appointment of Jackson was effective January 1, 1954, according to Mr. Staples' announcement.

Jackson has been in the service of Tide Water Associated for more than thirty years, commencing as a Plant Clerk in the Sales Department in California. Since 1947 Jackson has served as President of Seaside Oil Company, a California subsidiary of Tide Water Associated.



Harry A. Jackson

As Chairman of the Operating Committee, Eastern Division, with headquarters in New York City, Jackson will be in charge of all operations of that division of the Company which markets petroleum products in the New England and Middle Atlantic States.

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## Heitman Appointed Asst. To Gen. Mgr. A. O. Smith Corp.

Charles E. Heitman, manager of the Automotive Division of the A. O. Smith Corp., has been named to fill the newly-created post of assistant to the general manager of the company.

L. B. Smith, president, and F. S. Cornell, vice president and general manager, said that Mr. Heitman will assist the general manager's office in company-wide matters, but will for the near future continue to concentrate on administration of the Automotive Division.

He has managed the division largely since 1946, when he took over the passenger frame section; in 1948 Heitman was made group executive over passenger and truck frames as well as the control arms divisions of A. O. Smith and in 1951 took on an interim assignment as Milwaukee Works manager.

The new assistant general manager has been with the company since 1940. He spent nine years with the Budd Co., finally as its chief electrical engineer, then came to Milwaukee after a short period with Pullman Standard Car Mfg. Co.

---

Long a favorite in petroleum industry circles, W. R. (Frosty) Martin of Long Beach is on the way to full recovery from an illness which laid him low shortly before Christmas. Frosty, a founder of the famed Martin-Decker Corporation at Long Beach, manufacturer of weight indicators and drilling control instruments, is a member of the Long Beach Board of Harbor Commissioners. At one time he was president of the beach city commissioners.

## Collins Retires—Hensel Appointed

A. E. (Al) Collins, well-known area purchasing and stores manager for Shell Oil Company, retired on December 31 after almost 42 years of service, it was announced recently.

Collins, with more years of service than any other Shell employee in the western half of the United States, began his long oil industry career in 1912 as a waterman in the Coalinga oilfields.

**A. E. Collins**

In addition to witnessing the early development of the Coalinga fields, he has served in Long Beach, San Francisco, and Los Angeles in various positions handling the company's purchasing activities.

A naturalized citizen, Collins was born in London, England, first coming to this country in 1912. During World War I, he saw action in Belgium and France with England's expeditionary forces and, in World War II, he was an industry member of the War Production Board.

Shortly after his return from the WPB, he was made assistant to the general purchasing manager in San Francisco and in 1944 was appointed area purchasing and stores manager with offices in Los Angeles.

Having many friends in the Los Angeles and San Francisco areas, Mr. and Mrs. Collins plan to divide their time between raising camellias and renewing old acquaintances. They reside at 1805 Euclid Avenue, San Marino.

Replacing Collins is Rex C. Hensel who was transferred from New York earlier this year. Hensel, who has filled managerial positions for the company in its Mid-Continent, Canadian, and New York offices, lives at 1945 East Orange Grove, Pasadena, with his wife and son, Jan.

---

B. A. Otis, Henry Power and Herman W. Taylor of the General Petroleum Corporation retired January 1.

Otis was manager of the company's Land Department and has been with General Petroleum since 1925. An engineer and geologist, Otis worked in both capacities in his career with General Petroleum. He has been in oil land and leasing work since 1932 and has managed the Land Department since 1948.

Power, staff engineer in General Petroleum's Production Department, has been with the company since 1919. He was in geological work until 1928 when he was promoted to office engineer. He has held his present position since 1942.

Taylor joined the old Standard Oil Company of New York, a predecessor of Socony-Vacuum, in 1913. He was a division manager of motor oil sales in 1931 when he transferred to General Petroleum Corporation, an affiliate of Socony-Vacuum. He worked in lubricant and industrial sales until 1948. Since that time he has been in administrative work connected with gasoline and fuel sales.

---

Harrison H. (Harry) Evans and and Wesley (Wes) Holzgraf of Long Beach have retired from the General Petroleum Corporation after more than 55 combined years of service. Evans has been in the company's marine department since 1924 and at the time of retirement was assistant to the port engineer at Terminal Island. Holzgraf, whose service dates back to 1928, was accountant for the marketing division of the comptroller's department. Both men retired under General Petroleum's annuity plan which dates back to 1912.

**Arthur S. Marshall, general sales manager of the H. C. Smith Oil Tool Co., recently left by plane for South America on a 6 weeks business trip in the interest of his company. Marshall will tour the various oil fields in Venezuela, Peru, Bolivia, Chili, Brazil and Ecuador. Upon return he will visit his company's distributor in Mexico City.**

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## Shell Chemical Appoints New Plant Manager

O. M. Williams, who was assistant to the vice president of Shell Chemical Corporation, has been appointed manager of the company's plant at Dominguez, Calif., it was announced by C. W. Humphreys, manufacturing vice president. Williams succeeds Glenn Purcell who has been appointed manager of the company's plant at Houston, Tex.

Williams was born at Boulder Creek, Calif., and received a degree in engineering from Stanford University at Palo Alto, Calif. He joined Shell in 1935 at Martinez, Calif. He rose through positions of increasing responsibility there and at the company's plants at Dominguez, Calif., and Houston, Tex. He returned to Martinez in 1946 as plant manager and in 1951 became assistant to the vice president at the company's New York head office.

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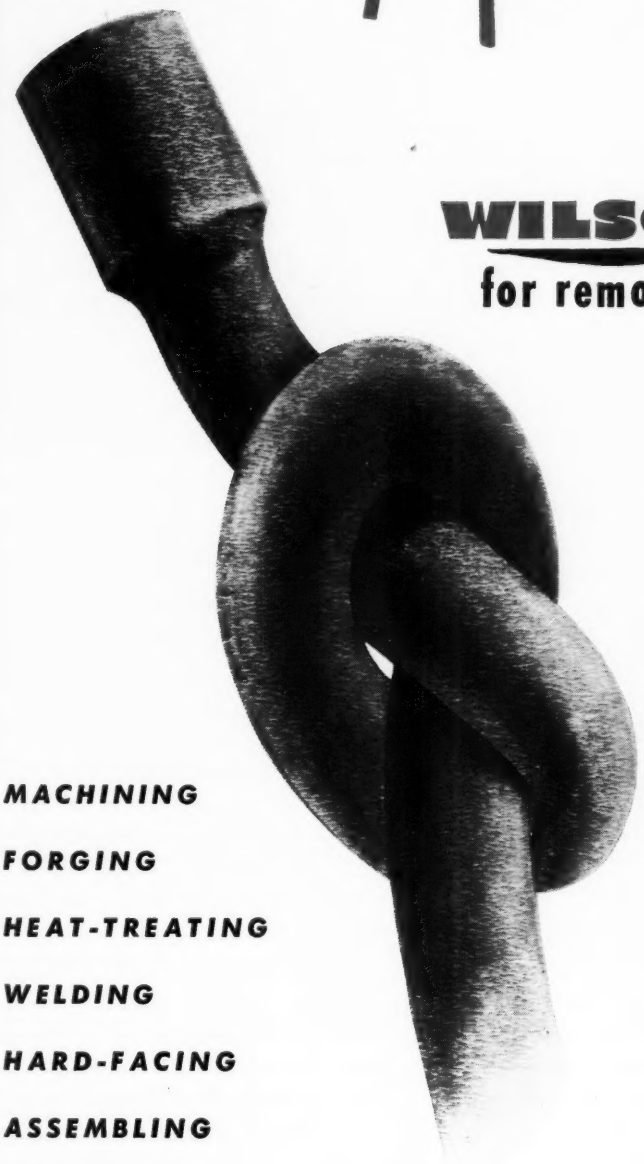
Dr. David L. Grove, Bank of America economist in San Francisco, spoke before the Society for Advancement of Management last January 11 in the Engineers' Club of the bay city. Many oil men were in attendance.

# knotty problem?



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## Executive Appointments Announced By Shell Chemical

R. C. McCurdy, President of Shell Chemical Corporation, announced the formation on January 1 of a new Ammonia Division with headquarters in San Francisco. The Division will handle the manufacture, distribution and sale of ammonium sulphate, ammonia and related products to agriculture and industry.

G. R. Monkhouse

G. R. Monkhouse, Vice President of the corporation, has been appointed to head the new division. L. M. Roberts, General Manager of Manufacturing, became Operations Manager in charge of manufacturing, distribution, and marketing-

L. M. Roberts

engineering. He has responsibility for the corporation's two ammonia plants: the pioneer plant at Pittsburg, California, which has been operating since 1931, and the new plant at Ventura which opened December 11.

V. C. Irvine has been named Sales Manager of the Ammonia Division. In addition to their new duties, Monkhouse and Irvine will continue as Vice President and Sales Manager, respectively, of Shell Chemical's Western Division which handles sales of other Shell Chemical products such as solvents, industrial chemicals, resins and plastics.

The increasing demand for nitrogen products made it practical to unify all phases of the corporation's ammonia business under one management, McCurdy said. He said that some 382,000 tons of fertilizer, most of it made from ammonia, were used in the Rocky Mountain and Pacific Coast States in 1942, while last year farmers of California alone used 750,000 tons.

Shell originally introduced the application of agricultural ammonia as a nitrogen fertilizer more than 20 years ago and has since pioneered and patented two economical methods of application: Shell Nitrojection Service and Shell Nitrogation Service. The corporation has made more than 500,000 applications of ammonia to Western farms, either by direct injection into the soil or by adding ammonia to irrigation water.

The bulk of ammonia produced at the corporation's two West Coast plants is earmarked for agriculture. Experts claim that every dollar spent by the farmer on nitrogen fertilizer returns four to ten dollars in increased yields of food and fiber.

---

Jack Reed, who was building rigs as long ago as the years opening the twentieth century, was among those casting an interested eye on the counterpart of a derrick, similar to those used in the early 1900s, on display at Union Oil Company's office at Orcutt. The reproduction was reported to have won his hearty approval. It was designed and constructed by Gene Hoback of Hollywood.

## H. C. Smith Appoints Foreign Distributor

Formation of Petroleum Industry Supply Co., Inc., to be exclusive distributor of H. C. Smith Rock Bits and Hole Openers throughout Peru, Bolivia, Chili, Brazil and

Ray Poole

Ecuador, was just announced by the new supply company's president and general manager, Ray Poole. Associated with Poole is Ing. Manuel Carrera V., who will be vice president and Northern division manager. The supply company's headquarters will be located in Lima, Peru and branches will be maintained in Piura, Peru and Paita, Peru.

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Although undergoing surgery December 17th at Santa Fe Hospital in Los Angeles, Frank Shane of the Chanslor-Canfield Midway Oil Company lease at Fellows was well enough to be moved to his Kern County home in time for Christmas.

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Clayton L. Orn, Houston division attorney for Ohio Oil Company, has been named general attorney for the organization.

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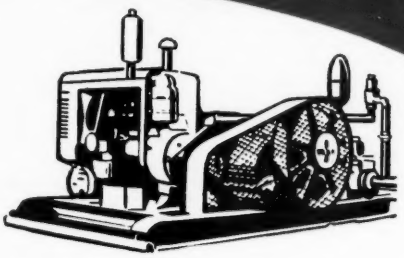
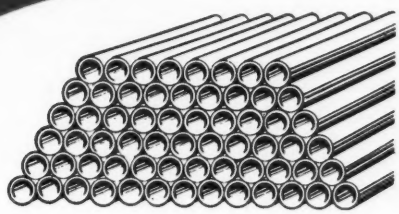
Morris Mizel, recently associated with a wildcat well drilled in the Raisin City area of Fresno County, is a widely known Oklahoma operator, who calls Tulsa home.

# FOR RENT





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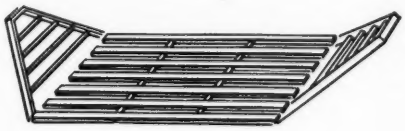

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# Field Development

## Beehive Bend Field Extended Successfully

General Petroleum Corporation has extended the Beehive Ben field about one and one-half miles to the south by completion of its McGowan No. 1 on Section 25-19n-2w, Glenn County. Bottomed at 5257 feet, the final touch was given to the well in a new sand and marked the third new zone discovery since Sunray Oil Corporation opened the field with production from Estes formation last April. On test of the Estes equivalent around 3650 feet gas flowed in quantity. Representative gauge of the well's power to produce is not yet available but consensus regards developments at this location as significant and a pronounced stimulant to new drilling. General Petroleum's next well in the area will be taken down on the Navarro property one mile northwesterly. Drilling chores were handled by Brown Drilling Company.

Richard S. Rheem, who not many weeks ago completed Southam No. 1 on Section 25-18n-2w at Princeton as a new Colusa County gas discovery,has abandoned a followup well on the same section at 3020 feet. Known as Gomes No. 1, this second test evidently missed the gas sand tapped from 2215 to 2230 feet in the discovery well, which started off at the rate of 2,850,000 cubic feet daily with a 24/64-inch choke in use. Prior to putting down the discovery, the area was the locale for two dusters.

East of the town of Livermore, The Texas Company is pursuing the search for new gas with its Maud Stanley No. 1 on Section 20-2s-2e, Alameda County. The project at present is working at 1600 feet.

Elsewhere in Northern California, The Texas Company is drilling in the relatively shallower formations with its J. H. Blake No. 1 wildcat on Section 12-11s-1e, west of Watsonville in Santa Cruz County.

### Fillmore Discovery

Standard Oil Company's Sespe Rancho No. 1 wildcat near Fillmore, which gave encouraging signs as the first major discovery of 1954, is again redrilling. The well, on Section 27-4n-20w, was carried originally to 14,503 feet and on the first redrill to 14,000 feet. Whipstock was set near 11,000 to initiate the current work. On Section 24-4n-19w, General Petroleum has a wildcat going named Cosby State No. 1. It is in the earlier stages. In the Piru area, Richard Rheem has pulled out of Larinan No. 1 on Section 24-4n-18w at 7731 feet. Another Ventura County abandonment was Union Oil Company's Simi No. 24 on Section 28-3n-17w. It quit at 5177 feet.

It is just about a year ago since Terry Drilling Company did what others had tried to do at various times for 50 years or more without success. It was Terry which turned the trick at Tapo Canyon and poked into the elusive pool with a well good initially for 1000 barrels of clean oil a day. The discovery well was a deepening job which showed its vigor near 2500 feet. Original bottom was 3000 feet, but uninteresting results at that depth set the stage for plugging back for addi-


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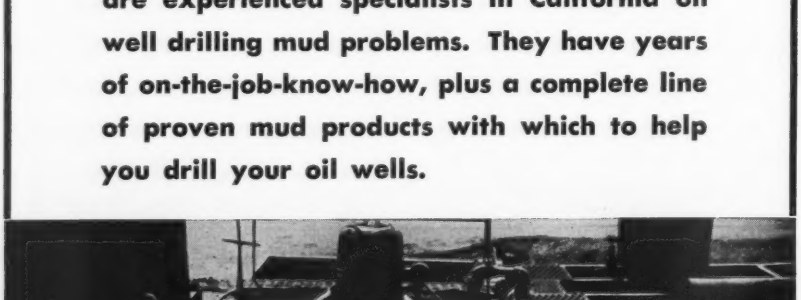

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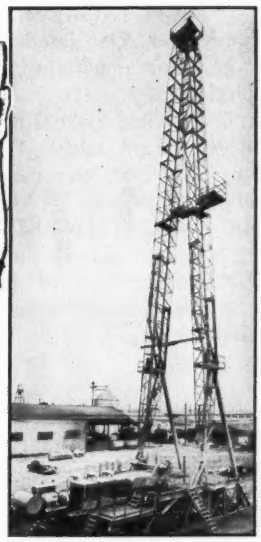
tional tests. Terry currently has nine wells on production in the field and another well drilling. It is understood that drilling will be sustained to fully delineate the production area on the lease embracing no less than 800 acres.

In the Las Posas area, Continental Oil's Berylwood Investment Co. No. 1 prospect hole is digging at 2456 feet on Section 18-2n-20w. Driller is Victory Drilling Company. Richfield's interesting wildcat tagged Janss No. 1 on Section 36-2n-20w at Conejo has reached a depth approximating 5200 feet and continuing to drill ahead. Harry C. Long's Burson No. 1 test on Section 6-3n-19w in the Basolo area has gone on the pump at a plugged depth of 3500 feet. Accurate gauge is yet to come.

In Monterey County's San Ardo field, both General Petroleum and The Texas Company have completed new wells. General's Orradre No. 246-2 on Section 2-23s-10e is in from 2180 feet for 500 barrels of 13.8 gravity oil a day. The Texas Company's Rosenberg No. 19 on Section 3 was completed flowing at 2340 feet for 60 barrels of 13.4 gravity oil from two intervals off bottom.

Casing has been set and Standard appears about to add another new producer with its Lucas No. 1 wildcat venture on Section 12-11n-22w at Oxnard. The project stopped drilling at a depth of 8339 feet. West of Oxnard, Bay Shore Oil Company's Maulhardt No. 1 test on Section 2-1n-22w is knocking at the door of the 7200-foot level. On proved ground, Jack Herley's J. H. No. 3 on Section 6-1n-21w is down 2465 feet, but tied up at that depth with a fishing job. Top of fish is placed at 1260 feet. In the Ramona field, Superior Oil's Black No. 16 well is making hole below 4500 feet.

Two miles north of the Elwood field, Signal Oil & Gas Company's Signal-Dos Pueblos No. 1 prospect well on Section 1-4n-30w in Santa Barbara County is drilling at 1575 feet. The contractor, International Drilling Company, has started the drill in Los Nietos Company's Madden No. 22-34 test on Section 34-



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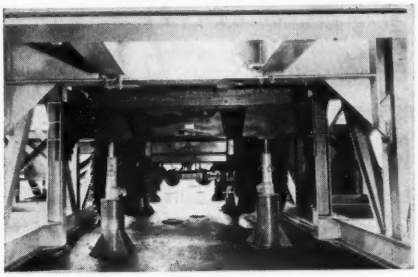

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10n-34w in the vicinity of Orcutt.

Tide Water Associated Oil Company has announced the successful completion of its 41st well in the Zaca Creek field near Los Olivos, Santa Barbara County. Davis No. 45 started off at the rate of 900 barrels of 14 gravity oil a day from a total depth of 4542 feet in the Chert zone. It also is putting out 5,000,000 cubic feet of gas daily This is the fifth well completed in the field during 1953 by the company.

### San Luis Obispo Leases

San Luis Obispo County appears deeply tinged with new leasing of available ground, particularly along the coast. Tide Water Associated Oil Company is reported to have taken more than 3000 acres, including the A. H. Heller land near Port Hartford, the Spooner Ranch, and the Sinsheimer and Joy holdings. The leases roughly are between Avila and Morro Bay. Union, Shell and Standard also are represented by large lease blocks in in the area.

Southeast of the Guadalupe field, General Petroleum Corporation's Mahoney No. 1 wildcat on Section 9-10n-35w has been abandoned. Drilled to a bottom of 4501 feet, the well for a time verged upon discovery status. However, protracted tests failed to react with commercial vigor and the well did a fade-away.

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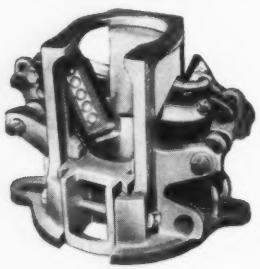
## Test Drilling Off San Pedro Studied

Considerable thought is being given by the Los Angeles Harbor Department to test drilling in the San Pedro Outer Harbor area. It is common knowledge that some geologists incline toward the belief that oil may lie in the area in a degree comparable with that produced in the Long Beach Harbor District. Before the Harbor Department could enter into any long-term drilling contracts, approval of the Los Angeles City Council would be necessary. Council President John Gibson who serves the San Pedro area, recommended caution in approval of the leases proposed and a study of subsidence, a problem found extremely perplexing to Long Beach. The Los Angeles Harbor Department's interest in San Pedro oil development springs from a report made two years ago by W. H. Geis, widely known geologist of Los Angeles. Mr. Geis' report pointed out that "a structural oil trap may exist under Los Angeles Outer Harbor at San Pedro in commercially important quantities and it is recommended that slant drilling be undertaken from an upland location near the Main Channel entrance." However, the geologist added that "irrespective of geological thinking, the arbiter is the drill, for only the drill can prove whether the geological speculations are valid."

It appears that drilling has been suspended at 2904 feet with G. A. Grober & Associates' No. 1 exploratory well on Section 12-10n-5w, two miles south of the Lockhart Ranch and a like distance west of Harper Lane road in San Bernardino County. The well is on the Earl C. Van Wert property and no great distance

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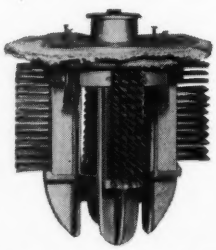

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753-2

from Kramer. A previous wildcat well was taken down in the area by Freemont Development Company to an unproductive 2460 feet. This operator is reported planning another try for commercial oil production. Near Chino, Lee Drilling Company's Eureka-Ruben No. 1-29 on Section 29-2s-7w continues to do nothing at 1737 feet. In the Yucca Valley area, Retari Company is down in the neighborhood of 400 feet with Retari No. 1 test on Section 25-2s-5e.

### Beach Test Deep

Operating under a lease with the City of Long Beach, The Texas Company is several hundred feet beyond the 12,000-foot specified minimum in its No. 1 test on Section 20-4s-12w on the municipal airport property at Long Beach. Location is east of Cherry avenue and south of Wardlow road. The lease provides for a 42.6 per cent royalty, plus a $104,000 cash bonus. Bixby Land Company has asked approval of the Beach City Council for a new drilling site on 100 acres of city-owned property, south of the airport. Texaco is also busy with the drill in its Carson NCT-1 No. 1 test on Section 12-4s-13w at Northwest Long Beach. It has reached a depth of 9900 feet or thereabouts. In the Long Beach field proper, there are currently a dozen wells drilling at various levels.

Webb Oil Company's Laurance No. 1 wildcat in the Turnbull Canyon area is ready to spud on Section 19-2s-10w, with Petrie Drilling Company doing the work. Continental Oil Company opened the Turnbull Canyon field in October of 1941.

Seaboard Oil Company, which has location made for its Wickham-USL No. 84-34 wildcat on Section 34-5n-17w at Castaic, has started the drill in its Seaboard No. 53-23 on Section 23-2n-16w at Northridge. The drill site is about two miles from Standard's Mission discovery well in San Fernando Valley. While on the subject. Standard's Mission No. 6-2A on Section 2-2n-16w is redrilling at 4660 feet. Mission No. 5-2 on the same section has foundation in.

On Section 7-3n-15w at Elsmere Canyon, the Company's No. 23 on fee property continues to drill ahead below 2700 feet. Lyons No. 1, a Standard wildcat effort on Section 7-5n-16w at Elizabeth Lake, is drilling beyond 1800 feet. Watkins Drilling Company has a contract rig working.

### Leffingwell Test

The next well to spud-in at Leffingwell will be Signal Oil & Gas Company's Signal-Stern No. 2 on Section 11-3s-11w. Hathaway Company's Tanamachi No. 1, a new producer on the same section, flowed at the rate of 100 barrels of 37 gravity oil a day from a total depth of 8705 feet on regular test. The company's Shoemaker No. 1 has started. Woodward No. 3 is a location on the section. Bell Petroleum Company's Woodward-Lewis No. 1 had to stop drilling for a time to work on mechanical troubles near 8500 feet.

Wildcat work of Hollandia Oil Associates with Hollandia No. 1 well on Section 30-3s-11w at Artesia has come to at least a temporary halt at 875 feet, plus or minus.

The Texas Company has everything in proper shape to drill its Stone NCT-1 No. 1 exploratory project on projected Section 35-3s-5e at Edom Hill in Riverside County.

Production developed by Richfield Oil Corporation's Edwards No. 1 on the Sunny Hills Ranch in Orange County was unsatisfying. The project, on Section 15-3s-10w, came in from a redrilled depth of 6410 feet for an initial output of 26 barrels of 24.1 gravity oil a day, cutting 10 per cent. Open was the interval of 6297-6407 feet. Original bottom was 9591 feet.

Santa Maria Drilling Company with a contract rig is making rapid time with the drill in Monterey Oil Company's No. 2 well on Section 29-6s-10w at Newport Beach. The project at last reports was below 1500 feet.

Los Angeles Basin field activities as a whole are not expected to show any diminution during 1954, but rather show a tendency to increase above 1953 operations. Showings encountered by the Tide Water Associated-Sterling-Trousdale combination with the McNally wildcat at La Mirada probably will set the pattern for new drilling in the area. Standard scored with a new discovery in recent months on old Mission land in San Fernando Valley and that area currently is being delineated by a rising number of test wells. New offshore oil was found by Monterey Oil Company at Newport Beach. The Texas Company opened the Olive area. There are many new and promising areas in the Basin which are not likely to be overlooked by both major and independent operators during the year ensuing. Currently, no less than 150 drilling jobs are at various operational stages in Los Angeles Basin fields.

The Rosecrans field has given the Edwin W. Pauley interests a new producer. Geddes No. 1 near 120th street and Halldale avenue came in from a plugged depth of 5750 for 125 barrels of oil and 1,720,000 cubic feet of gas a day. Hondo Drilling Company guided the destiny of the project.

At Whittier, Colorado Oil Company's Turner No. 12 on Section 22-2s-11w is idle at 937 feet. Standard has three wells going in the area, and O. M. Slosson, one.

In the Simi area of Los Angeles County, a wildcat well undertaken by Midway Drilling Company is digging at 1650 feet. It is on Section 23-3n-17w.

---

## Deep Wells Star Valley Operations

Probably never before has San Joaquin Valley field operations attracted so much interest from both within and outside the petroleum industry. It is natural enough when you consider the sprawling valley is the locale of Ohio Oil Company's deepest drilled hole in the world, down 21,482 feet, and Richfield Oil Corporation 17,895-foot record shattering producing well.

Spudded in October of 1951, Ohio Oil's KCL-A No. 72-4 on Section 4-32s-26e in the Paloma field met disaster when coming out with a core cut to present bottom at 21,482 feet. Stuck drill pipe caused the trouble, which a current fishing job is endeavoring to correct.

Richfield Oil's CLA No. 67-29 on Section 29-30s-25e at North Coles

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| Continuous Weld—Plain End | 2⅜" to 4½" O.D. | Up to 40' | Standard | Fontana, Calif. |
| Electric Resistance and Fusion Weld—Plain End | 14" to 18" O.D. | Up to 40' | .250" to .500" | Napa, Calif.—Basalt-Kaiser |
| Electric Resistance Weld—Plain End | 5⅝" to 12¾" O.D. | Up to 55' | .188" to .375" | Fontana, Calif. |
| Electric Fusion Weld—Expanded—Plain End | 20" to 30" O.D. | Up to 40' | .250" to .500" | Napa, Calif.—Basalt-Kaiser |

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Levee failed to produce in quantity in line with true economy due to a tight Eocene zone. But it is credited with giving up geological information beneficial in other tests taken down here and there in the valley.

These deep wells are somewhat indicative of the future course of valley drilling, which likely is to continue emphasis on depth.

Field gossip implied that General Petroleum Corporation may shortly launch a deep drilling campaign in the Sand Hills section north of the Tejon field, where it has assembled a large block of leases.

Land acquired by Tide Water Associated Oil Company between McFarland and Delano covers an area of wide proportions and it would occasion very little surprise if drilling should soon be initiated there. The leases are practically on virgin territory and any test drilling probably will not overlook either the shallow or deeper formations.

**Belridge Try Works**

Four miles east of the south tip of the South Belridge field, Arthur C. Fisher's Buena No. 1 wildcat well on Section 10-29s-22e is drilling below 1500 feet in designated 4000-foot test to the Pliocene. The project is entirely a family affair, being owned by Fisher and Mrs. Fisher and their children, Conrad, William and Linda. Sections on all four sides of the Fisher location are owned in fee by Standard Oil of California. Lands adjoining the balance of the lease held by Fisher are owned in fee by other major companies. South Belridge is the nearest field, discovered in April 1911 by the Belridge Oil Company with a well bottomed at 782 feet and producing initially 100 barrels of 25.3 gravity oil a day. Lost Hills, the closest field to the north, was discovered in 1910, with production pried out from 530 feet. Elk Hills, the closer field to the south, was opened by Standard in February of 1920. The discovery well came in for 4500 barrels a day from only 2828 feet. Speaking of Elk Hills, Humble Oil controls a sizable lease block north of the field, ripening for drilling.

As a sequel to Superior Oil Company's new discovery at Old River, The Texas Company is preparing to take down the first followup—Counter No. 1 on Section 25-30s-26e. The drill site is some 1000 feet northeast of the discovery well, which at last reports was producing 120 barrels of clean 36 gravity oil by way of a 9/64-inch choke. In the Mountain View area, Texaco has gone back to Brandt NCT-1 No. 1 on Section 24-31s-29e and has plugged back from bottom of 6495 feet redrill to the Chanac zone.

**Tejon Test Fails**

The first test ever to be taken down on Section 17-11n-19w north of the Tejon field has failed of its purpose. Undertaken by Reserve Oil and Gas Company and known as Reserve-Butler No. 44-17, the wildcat went off the board at 8550 feet as a duster. On Section 32-11n-19w in the Tejon field Standard is way down deep with its CCMO No. 4-35 test at a depth last reported below 13,300 feet.

Near the Ten Section field in wild-


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cat territory, E. A. Bender's KCL No. 67-24 on Section 24-30s-25e is ready to kickoff in a quest for new production.

Of interest is the news that Havenstrite Oil Company and William L. Rawn, Sr. have sold to The Texas Company their Richards and Pauley leases in the Arvin area, containing nine wells. Harold L. Rowland, broker, represented the seller. The purchase price was not announced.

Approximately one mile west of the Pleito Creek field discovery well, Humble Oil's KCL No. B-17 on Section 34-11n-21w is carving out a new hole below 1000 feet. The test probably will be carried to 5000 feet or so.

A short distance south and west from his DLK No. 1 new pool discovery northeast of the Edison Groves field, A. M. Dunn is drilling ahead through the shallower formations with his DLK No. 2 on Section 28-29s-29e. The discovery well was placed on production last October for 25 barrels of clean 16 gravity oil from three intervals between 1175 and 1320 feet. Burke Drilling Company is in charge of taking down the well. Engineering is being handled by Kemnitzer, Richards and Diepenbrock.

Bent on nailing a northwest extension to the Kern River field, Malcolm MacSween & Associates are getting ready to drill Sheila No. 1 on Section 13-28s-27e. Easton & Sacre are handling engineering.

### Midway-Sunset Busy

Sustained development characterizes Oceanic Oil Company's work in the Midway-Sunset area. Its CCMO No. D-1-7 on Section 7-32s-23e is drilling above objective depth. CCMO No. G-2-8 on Section 8 is making hole not far below grass roots. The company's CCMO No. A-3-1 on Section 1-32s-22e has been written off at 4093 feet as a dry hole.

Krug Drilling Company is drilling several hundred feet below topsoil with its contract job—Pacific Oil & Gas Development Corporation's British-American-Oceanic No. 73-20 Section 20-31s-24e in the Dusty Acres area, Kern County.

Richfield's San Emidio A. No. 27-20 on Section 20-11n-22w, a Miocene discovery in the Los Lobos area, is putting out 110 barrels of 24.4 gravity oil through an 8/64-inch orifice, along with 151,000 cubic feet of gas daily. It was redrilled to 6659 feet and it was bottomed in the Reef Ridge formation. In the Upper Santiago area, Richfield has pulled out of its Ramsey No. 1 wildcat on Section 22-10n-23w at 3912 feet in basement rocks.

Cliff E. Zillgitt's next Kern County drilling job will be No. 22-2 test on Section 22-9n-17w on the Rancho La Liebre.

On ground northwest of the Belgian Anticline field, where good producers usually are completed, Union Oil Company's Hancock No. 36-7 wildcat on Section 7-30s-21e is digging below 1950 feet. The contractors are Barnes & Shadrick.

Approximately 1600 feet north and 400 feet east from A. J. McGreevy's discovery well near Porterville, McGreevy-Neary Oil Company's Doe No. 1 on Section 22-22s-27e is drilling below 800 feet as this is jotted down. The oil finder was completed at a plugged depth of 914 feet for 60 barrels of 16.5 gravity crude oil a day. Original bottom was 988 feet. Southwest of Earlimart, Ohio Oil's Jack C. Phillips, Jr. No. 1 explorer on Section 12-24s-24e is still tied up with a fishing job at 6607 feet.

### Hollister Try Quits

San Benito County enthusiasm for wildcat drilling was somewhat dampened when Tide Water Associated Oil Company abandoned its Breen No. 1 on projected Section 19-12s-5e, four miles northwest of Hollister. Drilled to a bottom of 4591 feet, a series of tests were run during a six-week period. At Black Canyon, Standard Oil's Eade No. 3-2 prospect job on Section 2-19s-9e is drilling above objective depth of some 4000 feet. Location is one mile south of a previous try which Standard drilled some months ago to just short of 3850 feet with negative results. The Texas Company has Nutting No. 1 wildcat going on Section 32-12s-5e in the Hollister area. W. W. Holmes, Operator, is working with Rudolph No. 1 test on Section 4-18s-9e in the King City area.

Continental Oil Company is drilling below 1000 feet with its BLC No. 1 wildcat venture on an expansive lease from the Boston Land Company east of Huron in Kings County. General Petroleum Corporation a few years ago put down two wildcats on the Boston Land Company property without successful termination. It is understood that Conoco will carry its present effort to a depth shallower than that attained by General's wildcat brace. A depth of 4000 feet probably will tell the story. Continental the other month abandoned its Westlake Unit One No. 1 wildcat on Section 32-22s-20e in the Dudley Ridge area at a depth of 3800 feet.

Up north in the state of Washington, Continental someday real soon will have the rotary spinning in the first well of a drilling campaign mapped out for the Grays Harbor area. The first holes drilled will be primarily designed to acquire geological information and the correlation of data already gathered by earlier drilling in the area. Some years ago, Union Oil Company put down a series of wells in the area generally and brought to light in some of them much of interest in the nature of oil and gas. However, the showings failed to measure up to commercial worth.

Caminol Company's Dagany No. 1 wildcat on Section 33-24s-18e at Pyramid Hills, or about two miles southeast of the discovery well born in McLure Valley through the efforts of Reserve Oil and Gas Company, is still drilling at a depth below 7500 feet. The well is on a 100-acre lease in which Caminol divides interest with Intex Oil Company. Union, Norris, Franco Western and General Petroleum are understood dry hole contributors. Present production of Reserve's Reserve-Mitchel-Orchard No. 37-20 on Section 2-24s-18e is 15 barrels of 22.8 gravity oil daily, cutting 10 per cent, from plugged bottom at 990 feet. The well originally went to 4873 feet and found absent the pay sand opened in the discovery, producing from around 4400 feet.

In the Alpaugh sector, W. W. Holmes has on the drilling calendar Carpenter No. 1 on Section 33 and Whittier No. 2 on Section 32-23s-22e.

## Outlook For 1954

**By T. S. Petersen, President Standard Oil Company of California**

At this time of year, when many appraisers of overall economic conditions are predicting a general business decline in the coming year, it is heartening to note that the oil industry looks to 1954 as a year in which volume of business should continue to show an increase, and profits hold to present levels.

Petroleum has been one of the great growth industries in the U.S. Since the end of World War II domestic demand has increased an average of 6.8% each year, and in almost every year during that period the industry had to struggle to meet demand. In 1954 we should expect a more normal rate of growth if business activity can be sustained, perhaps 4%. Supplies should be adequate.

It is the assurance of continuance in basic growth that permits the industry to expand capacity beyond current needs and thus provide the margin of safety so necessary during periods of emergency. It is also this growth trend that provides the vigor for which our industry is so well noted. New challenges continuously confront all segments of the industry to expand capacity and improve techniques.

On the Pacific Coast, the petroleum industry for the first time in several years enters a new year with ample stocks of the various products on hand. And in the coming year, it will continue to add to its refining capacity, so that a growing domestic market in the Far West may be supplied with all of its oil needs.

Although faced with the loss of the traditional British Columbia market, now being supplied with Canadian crude through Trans Mountain Pipe Line, West Coast refiners will supply an increased volume of military requirements which formerly were procured elsewhere.

The prospective market for oil products in this area will be well in excess of volumes which can be supplied from California oil fields, however, and it will continue to be necessary to bring in crude oil from other areas.

Emphasis of refiners during 1954, as elsewhere in the nation will be in the direction of higher quality products, reflecting the payoff of post-war research and new refining processes.

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## More Lane-Wells Fellowships Announced

Announcement has been made of two more men—A. B. Crowther, Jr., and Floyd Caylor—now taking advanced studies on fellowships granted under the Lane-Wells Scholastic Program, designed to aid promising students and graduates to continue their studies and research in petroleum engineering.

Mr. Crowther, who plans to specialize in exploitation engineering, is studying at the University of Texas. A native of San Antonio, Texas, he gained his B.S. degree at Texas A. & M, where he was active in the Petroleum and Geology clubs, and won membership in Phi Eta Sigma, national honor society. He is also a member of AIME and AAPG.

Mr. Caylor, now carrying on advanced studies at the University of Oklahoma, was born in Hugo, Oklahoma, where he received his early education. After three years at the United States Naval Academy at Annapolis, he went to the University of New Mexico, where he earned his B.S. degree in mathematics. Prior to his entering the University of Oklahoma, Caylor was engaged in statistical and mathematical work in the laboratories of the famous White Sands Proving Grounds in New Mexico.

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## CNGA Approves ASTM-IP Tables

By officially adopting a resolution the Executive Committee of the California Natural Gasoline Association approved the recently published volume of recalculated and extended ASTM-IP Petroleum Measurement Tables. This action also included the revisions necessary to tables 1 and 2 of the association's Bulletin TS-441 so that they will be in accord with the new tables.

The resolution in part states, "And, Be it further resolved that the California Natural Gasoline Association shall concur in the approval of the ASTM-IP Petroleum Measurement Tables by the API with the understanding that these tables shall become effective January 1, 1954 in all cases where official regulations or contracts do not provide otherwise."

Revisions necessary to tables 1 and 2 of Bulletin TS-441 are listed in the enclosure for use of those using that bulletin. Revised copies of those tables will be available from the C.N.G.A. office, 510 W. 6th Street, Los Angeles 14, California, after December 20, 1953.

| Specific Gravity Temperature Corrections | CNGA TS-441 | ASTM-IP |
|---|---|---|
| .590 @ 43° | .580 | .579 |
| .590 @ 74° | .598 | .599 |
| .590 @ 77° | .600 | .601 |
| .600 @ 47° | .593 | .592 |
| .600 @ 48° | .594 | .593 |
| .600 @ 50° | .595 | .594 |
| .600 @ 52° | .596 | .595 |
| .600 @ 59° | .600 | .599 |
| .600 @ 66° | .604 | .603 |
| .600 @ 71° | .607 | .606 |
| .600 @ 73° | .608 | .607 |
| .600 @ 76° | .610 | .609 |
| .600 @ 78° | .611 | .610 |
| .600 @ 80° | .612 | .611 |
| **L. P. G. Volume Corrections** | | |
| .520 @ 118° | .903 | .904 |
| .525 @ 103° | .932 | .933 |
| .525 @ 123° | .897 | .898 |
| .525 @ 133° | .878 | .879 |
| .530 @ 133° | .882 | .883 |
| .535 @ 128° | .895 | .896 |
| .545 @ 123° | .909 | .910 |
| .550 @ 68° | .989 | .990 |
| .555 @ 134° | .898 | .899 |
| .555 @ 136° | .895 | .896 |
| .570 @ 121° | .925 | .926 |
| .580 @ 126° | .923 | .924 |

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R. D. Bush, supervisor of the Division of Oil and Gas for the California Department of Natural Resources, plans to retire next April 1. He has held the position with distinction for 30 years.

---

Tulsa and other oil centers in the Mid-Continent region were recently visited by J. Murray Walker, a sales executive for Lane-Wells Company at Los Angeles. Murray is a former Tulsan.

## Sealed Type "I" Bowen Rotary Jars

Sealed Type "I" Bowen Rotary Jars are **straight pull mechanical type rotary** jars which provide greater efficiency in jarring operation.

The ability of these Jars to strike heavy blows with a string completely free from torque eliminates any aggravating tendency to release the fishing tool below the jar. Torque free operation also reduces equipment wear and eliminates hazards.

The ability of these mechanical type Bowen Rotary Jars to operate successfully under all conditions has been proven on countless jobs throughout the world for many years. Since these jars are purely mechanical their tripping mechanisms do not depend upon a complicated series of packing elements. Hence their ability to deliver heavy blows is absolutely unimpaired by packing failures, abrasive elements in the circulating fluid or high temperatures.

These Jars will deliver the same heavy upward blows regardless of whether the string is elevated slowly or with great rapidity.

After considerable service, the wearing parts of Sealed Type "I" Bowen Rotary Jars can be replaced easily and economically and the tool will regain all the properties of a new one.

### SEALED FEATURE

The tripping mechanisms in Sealed Type "I" Bowen Rotary Jars are identical with those in the earlier types of Bowen Rotary Jars that have performed successfully the world over under all types of conditions for many years. These new Jars differ in that they are filled with oil and sealed top and bottom against the ingress of well fluid. With this arrangement, the moving parts of Sealed Type "I" Bowen Rotary Jars work in a bath of oil and advantages are produced thereby as follows:

**Constant Tripping Tonnage**

**Lubrication** which practically eliminates wear on any other parts.

**Infrequent Servicing**

The Floater is an important part in Sealed Type "I" Bowen Rotary Jars. It automatically moves up or down the Washpipe maintaining a pressure balance within the Jar and thereby avoids excessive pressures on the Seals.

For full information on Sealed Type Jars write Bowen Fishing Tool Company, Santa Fe Springs, California.

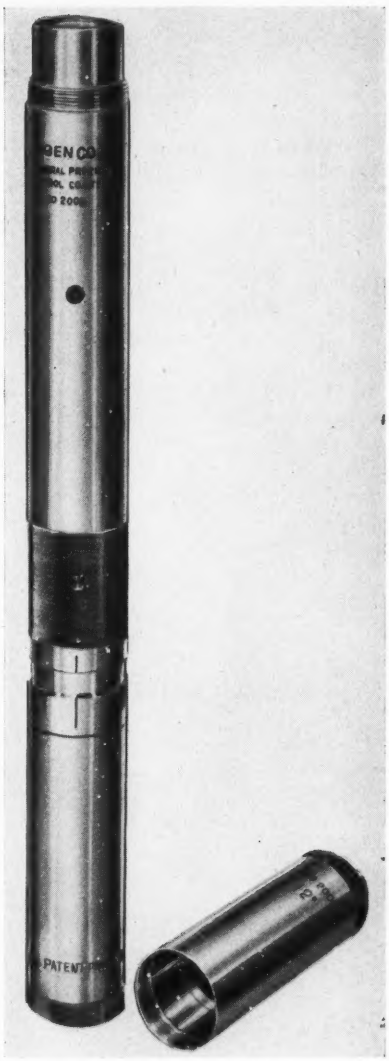
---

## New Directional Survey Instrument Introduced

C. R. Hall, Jr., president and general manager of General Precision Tool Co., 14674 Plummer St., Van Nuys, California, has just introduced to the oil industry a new directional survey instrument.

Mr. Hall, in making this announcement, had the following to say about his instrument:

"The Genco directional instrument for deep-well surveying is a precision-made easy-to-operate mechanical instrument. It is a single-shot instrument with controlled timing mechanism which records drift and direction within two minutes after reaching the bottom of the well by means of the plumb-bob punching the chart paper. Genco's special features of a locked plumb-bob and compass mechanisms eliminate inaccurate recordings caused by vibration and thus assure greater accuracy. Its full mechanical construction eliminates any possibility of faulty recordings that would be caused by weak batteries or film fogging. Genco is made of a non-magnetic metal, with a low co-efficient of thermal expansion which enables Genco to operate under high temperature conditions.



"The Genco uses a simple chart paper which gives an immediate reading without developing or using any complicated chart reading holders. Any member of the drilling crew can easily operate a Genco instrument without any special training."

# THIS

# LAUGH

# OFF!!

Thinking that it was a sergeant on the other end of the phone, the lieutenant bawled him out unmercifully.

"Do you know whom you are addressing?" was the icy reply.

"No," said the lieutenant.

"Well, this is Colonel Wallace."

"Colonel," said the lieutenant, "do you know whom you are addressing?"

"NO," thundered the colonel.

"Thank God," said the lieutenant, and hung up.

---

A lady riding on a bus turned to her friend and said: "I forgot to pay my fare when I got on."

"Save your money," said her friend, "the bus driver didn't notice you."

"No, I've found that honesty always pays," said the first lady and went up to pay the driver.

"See, I told you honesty always pays," she said when she returned. "I handed the bus driver a quarter and he gave me change for fifty cents!"

---

A sign seen on the rear of a truck: "Many a man has carved his tombstone by chiseling in traffic."

---

People worry for only two reasons —either they're successful, or they aren't successful.

---

The only people who enjoy your troubles are lawyers—they get paid for it.

---

She used to be the belle of the town, but somebody "tolled" on her!

---

As one Hollywood kiddie put it to to another: "I have had four daddies by my first mama and three mamas by my fourth daddy."

After a severe air raid in London during the war, a rescue squad saw an old man in a bath tub, stark naked, holding his head and muttering.

After getting to him, one rescuer asked: "Are you all right?" "I can't understand it," the old fellow said dazedly.

"What can't you understand?" asked the rescuer, kindly.

" I can't understand it," said the old man. "All I did was pull the plug and the whole house came down!"

---

One stenographer to another: "They not only give you a pension in this office, but you age here more quickly."

---

First She: "I trust I make myself plain."

Second She: "Nature did that, dearie."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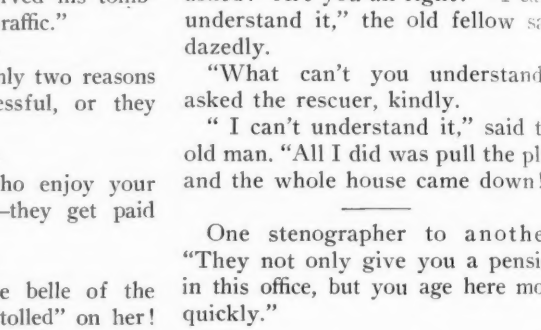


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